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ANNUAL ADMINISTRATION REPORT

OF THE

CIVIL VETERINARY DEPARTMENT IN INDIA

FOR THE OFFICIAL YEAR

1892-93.

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GOVERNMENT OF INDIA.

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SECTION I—MILITARY.

HORSE BREEDING.

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SECTION I.—MILITARY.

HORSE-BREEDING.

The total number of horses kept for stallion purposes by the Government in Bengal, Bombay, and Central India on the 1st of April 1892 was as given in the table below:— Stallions: Number of—

Breed	Bengal	Bombay.	Central India
Thorough-bred English	59	10	.....
Half-bred and Norfolk Trotters	120	8	.....
Australian	2	...	..
Three-quarter bred	1	1	.....
Arab (horse)	80	26	6
Do (pony)	...	30	.....
Pegu (pony)	...	1	..
Persian	1	...	.....
Turkoman	1	...	.....
Country-bred	4	...	1
TOTAL	268	76	7

Received during the year.

2. The number received during the year is given below :—

Whence received.	Class of Stallions.	Bengal Presidency.	Bombay Presidency.
From England ...	Thorough-bred English ...	7	2
	Three-quarter bred ...	1	...
	Half-bred and Norfolk Trotters	27	...
Omitted in last year's returns	Norfolk Trotters	2	...
Purchased in India ...	Arab (horse)	22	3
	Australian	2	...
	Arab (pony)	...	2
By transfer from reserved colts.	Country-bred	3	...
By transfer from Bombay ...	Thorough-bred English ...	1	...
	Norfolk Trotter	1	...
By transfer from Bengal ...	Half-bred English ...	...	1
	TOTAL ...	66	8

3. Two Australians and 22 Arabs were purchased in India by the Inspector-General, Civil Veterinary Department, during the year under report.

4. The stallions obtained from England appear generally of the stamp indented for. It remains to be proved whether the half-bred and three-quarter bred horses will produce as good stock as the Norfolk Trotters with longer pedigrees have given.

5. Of the Australians purchased in India, one is thorough-bred and the other Norfolk Trotter on both the sire and dam side. The Arabs were as a lot good; but, as has been remarked in former annual reports, the difficulty experienced in obtaining a sufficient number of pure-bred, large-boned Arabs is yearly increasing. It has been suggested that larger sums be offered for Arab stallions in the Bombay market. My experience of now 43 years in the Arab horse mart of Bombay leads me to believe that the monies now paid are sufficient for the stamp of horse obtained. True it is that we hear of prices from Rs. 2,000 to 10,000 being given for some Arab horses; but these are as a rule fancy prices for race horses, and the majority of these fancy priced animals are, though of high class, quite unfit for stud purposes on account of being very deficient in bone and substance.

The demand for stud Arabs in Northern Arabia and Syria by European Continental Governments has doubtless raised the prices in those provinces; but I gather from reliable Arab importers that prices from Rs. 1,200 to 2,000 are sufficient inducement to ensure the best Arabs obtainable in South Arabia being imported to Bombay.

Among the Bombay dealers, as among dealers in most countries, are a few men who put long prices on moderate, but fat and sleek, horses with the hope of selling some of them to native noblemen or their agents. These high priced Arabs are as a rule high under the standard, but shallow in girth and long in leg, and, when fattened up and in dealers' condition, become in the eyes of those who like tall horses excellent, and worth the large sums they are priced at.

During my long experience of the Bombay Arab horse market, I have only in one instance had to give as high a price as Rs. 3,000 for an Arab stallion, and this horse proved as a stock getter worth the money. The Government of India have not limited the price to be given for stud Arabs, and should I have the good fortune to find in the market an Arab horse worth more than Rs. 3,000, I would not hesitate to purchase the animal.

6. I would here note that on account of so few pure bred and good boned Arabs now-a-days being obtainable in Bombay, I proposed that horses of this breed should be obtained from the Hungarian studs; and I was deputed in July 1892 to proceed to Buda Pesth with the view of purchasing six from the Government of Hungary. The authorities are aware of the reason why these horses could not at the time be secured. The whole correspondence, together with a report on horse-breeding in Hungary by Major Douglas Dawson, Coldstream Guards, is given as Appendix I, (*vide* page 61), a perusal of which will be found most interesting.

No 80, dated 7th June 1892.

7. It may be hoped that arrangements will yet be made by which some really good Arabs will be bought in Hungary.

8. With the view of using every endeavour to obtain pure bred Arabs of the stamp required, I submitted suggestions that—

No 47-M.D., dated 16th September 1892, to the Military Department.

(*a*) Reliable Arab dealers of the Bombay market might be requested to import such horses, and, with the sanction of the Government of India, the offer of the Arab dealer "Jassim bin Fid" to bring about 20 first class Arab horses for the pre-emption of the Government of India has been accepted with the understanding that only those approved by the Government purchasing officer will be purchased.

These horses are expected this season.

(*b*) That a selected officer be deputed to proceed first to Southern Arabia, and afterwards to Northern Arabia, to visit the tribes possessing the best horses, and to purchase a given number considered suitable for stud purposes. It was decided by the Government of India that the proposal (*a*) should be first carried out; and that of (*b*) should pend for the present. The correspondence with regard to these proposals is recorded as Appendix II (*vide* page 78), to which special attention is invited.

9. It is doubtless a very easy matter to describe the kind of stud horses required; but, as noted by General A. R. Thornhill in many letters addressed to me, he generally found great difficulty in securing the number of thorough-breds of the stamp required for the Government of India, and had on several occasions to make up the total of indents with a larger number of the class hackneys than was indented for. Again, the well-known fact of fewer good pure bred and large boned Arabs being imported annually to the Bombay market renders it impossible to obtain Arab horses of the good old stamp. As a rule, mongrels, half Persian, and half Arab form 90 per cent. of the horses imported by the Arab dealers. Again, in former Annual Administration Reports it has been recorded that, despite the endeavours made to obtain really good Thorough-bred Australian stud horses, possessing large joints and bone of leg, only now and then can an Australian horse of the right stamp be purchased. The late Mr. Dangar, one of the leading breeders of thorough-breds in Australia, in a letter, dated 10th December 1885, to me stated: "I shall have much pleasure in doing what I can for you in informing breeders of your requirements. I must, however, say at the outset that there are very few breeders who breed the description of horse you require, and who would care to export them for the money. We are in quest of the same kind of horse ourselves. The stallions mostly used are those which have been on the turf. The good ones fit to breed from are worth £500 to £1,000, and those which might be got at your figure would not be of the sort you require, nor indeed would it be judicious to breed from them,

they being mostly on the leg without substance. This is not saying much for our horses, but the fact is breeding is such a hazard that good ones are exceptions, and most breeders only breed for the turf."

10. The Director, Army Remount Department, in paragraph 48 of his Annual Administration Report for 1892-93 notes his opinion as to the stud horses required for India. The reasons why the classes of stallions sought for are not obtained in numbers sufficient for the demands of the Government of India I have above noted.

11. It has been stated that if more money were allowed by the Right Hon'ble the Secretary of State for stallions purchased in Great Britain and Ireland, that thorough-breds of the right stamp would be easily secured; but I believe General Thornhill has recorded that he was satisfied with the amount sanctioned, and would not obtain better thorough-breds than those purchased by him were he allowed more funds. The fact is that it is difficult to obtain thorough-breds in sufficient numbers of the class required, *viz.*, deep in girth, broad in chest, with short, large jointed, and big boned limbs of a build of the hunter stamp. Doubtless thorough-breds are sold at prices ranging above the limit sanctioned by the Secretary of State (350 guineas) up to £20,000 to £30,000; but, though these high-priced animals with racing pedigrees are used for racing stud purposes, they would not be considered of the hunter type fit for Government stud purposes in India.

Casualties.

12. The number of casualties and the diseases from which stallions died are given in Appendix III (*vide* page 82). The following table gives the abstract of casualties :—

Presidency.	Province.	Number died.	Number destroyed.	Total.	Average death.	Average destroyed	General average.
Bengal ...	North-Western Provinces.	8	20	28	4·85	7·46	12 31
	Punjab	5	...	5			
Bombay ...	Deccan... ...	1	...	1	5·40	...	5·40
	Guzerat ...	1	...	1			
	Sind	2	...	2			

13. The casualties amongst horse stallions were 4 against 6 last year in Bombay. In the Punjab there were only five deaths, giving an average of 3·20 against 11·32 last year. In the North-Western Provinces the great number of destructions is accounted for by the fact that, owing to the paucity of stallions, a number of vigorous old horses were kept on from last year and the year before, and these had to be destroyed during the year, either being worn out or the subjects of disease, the result of senility. Sixteen were destroyed, being worn out. Three deaths may be ascribed to accidental causes; one died at Bombay shortly after arrival, and one was transferred for treatment from Baluchistan. This leaves three deaths from disease amongst the stallions of the North-Western Provinces.

Sales.

14. Appendix IV (*vide* page 84) shows the horses disposed of by sale. Nine were purchased from the Department for stud purposes, and 13 were cast for reasons rendering them unfit.

15. Several of the low-priced horses sold for stud purposes had been purchased in the Bombay market to meet the demand of District Boards for galloways and ponies.

16. The stallions of various classes on the strength of the Bengal, Bombay, and Central India establishments on the 31st March 1893 were as follows:— **Number of stallions present.**

Breeds.	Bengal	Bombay.	Central India.
Thorough-bred English	53	11	...
Three-quarter bred	1	1	...
Half-bred and Norfolk Trotters ...	130	7	...
Australian	4	...	...
Arab (horse)	86	25	6
Do. (pony)	...	30	...
Persian	1	...	...
Turkoman	1	...	...
Country-bred	6	...	1
TOTAL ...	282	74	7

17. This gives a total of 282 against 268 last year in Bengal and 74 against 76 in Bombay. The seven horses in Central India have only been brought on the strength this year. Of those noted as in Bengal 35 were in depôt for acclimatization, and therefore their services were not available in the districts, 18 were awaiting sale, and others were under treatment for accidents or disease.

18. The table below gives the distribution of stallions for the last 17 years in the horse-breeding provinces:— **Distribution.**

Years.	Bengal.					Bombay.				Central India.	Total.
	North-Western Provinces.	Rajputana.	Punjab.	Baluchistan.	Total	Deccan.	Gujrat.	Sind and Cutch.	Baluchistan.		
1876-77	152	2	127	...	281	...	...	...	...	...	...
1877-78	160	7	136	...	303	...	...	...	...	...	...
1878-79	194	7	123	...	324	27	17	12	...	...	56
1879-80	148	5	156	...	309	41	22	12	...	...	75
1880-81	144	5	165	...	314	40	20	9	...	...	69
1881-82	148	6	161	...	315	45	24	9	...	...	78
1882-83	107	6	184	...	297	47	20	13	...	...	80
1883-84	106	2	190	...	308	41	18	16	4	...	79
1884-85	125	...	188	...	313	37	18	17	3	...	75
1885-86	133	1	176	...	310	45	19	17	8	...	89
1886-87	131	2	166	...	299	55	20	28	19	...	122
1887-88	115	2	163	14	294	58	17	28	...	...	103
1888-89	116	3	165	13	297	55	14	27	...	...	96
1889-90	107	3	129	19	258	50	1	23	...	...	84
1890-91	124	2	137	21	284	48	11	24	...	...	83
1891-92	137	2	106	23	268	45	11	20	...	...	76
1892-93	131		128	23	282	45	10	19*	...	7	74

19. Maps will be found in the cover of this volume showing the breeding districts of Bengal, Central India, and Bombay respectively. Stands where horses are located are marked in red; where donkeys are stationed, in green.

20. Appendix V (*vide* page 86) gives the horse and donkey stands abolished and established in 1892-93. A summary is given below :—

	Number of stands abolished.	Number of stands established.
North-Western Provinces	2	5
Punjab	2	3
Baluchistan	2	3
Bombay Presidency	6	7
TOTAL ...	12	18

21. The number of stands established exceeds by six that of those abolished.

Stallions: Demand for—

22. The Superintendent, Civil Veterinary Department, North-Western Provinces and Oudh, in his report states: "The want of hackney sires mentioned last year in my report still continues unabated." The remarks alluded to by the Superintendent are: "The demand for stallions in the North-Western Provinces continues, and I could utilize the services of 8 or 10 more horses of the hackney stamp if I had them."

23. The Superintendent, Civil Veterinary Department, North Punjab, remarks: "I imagine that it is owing to financial difficulties that we are kept so short of stallions. Speaking for the Punjab, it may safely be stated that 40 more horses might with great advantage be supplied. Last year 35 new horses were indented for, but only 11 were received."

24. The Superintendent, Civil Veterinary Department, Bombay Presidency, states that "the demand for stallions is increasing, and I have indented for 3 thorough-breds and 3 three-quarter breds from England. I shall require to purchase about 12 Arabs locally." In referring to Baluchistan, he remarks: "I would once more call your attention to the fact of the extreme paucity of stallions in Baluchistan. I am informed by Major Gaisford, Political Agent, Quetta, that numbers of mares have been sent away owing to the fact that all the horses in that district have considerably exceeded their limit. If available, the following horses are urgently required :—

	Arabs.
Quetta	4
Sibi	2

"If one or two three-quarter bred horses are available, their services will be fully utilized at Quetta."

25. The reason why there is a paucity of stallions rests on the fact that the number indented for on England was not fully supplied. The number indented for was 77, and the number supplied 35.

Comparative merits of stallions.

26. In the following table, the number and class of sires, the produce of which won prizes, is given :—

Class of sires.	Number of sires in each class.	Number of prizes awarded.					Proportion of prizes to each class.				
		1st prize.	2nd prize.	3rd prize.	Other prizes.	Total.	1st prize.	2nd prize.	3rd prize.	Other prizes.	Total.
Thorough-bred English ...	70	59	52	33	142	286	0·84	0·74	0·47	2·28	4·85
Half-bred English and Norfolk Trotters ...	157	129	124	125	446	824	0·82	0·78	0·79	2·84	5·24
Australians (Walers) ...	5	2	2	2	5	11	0·4	0·4	0·4	1	2·2
Arabs	61	35	27	32	104	198	0·57	0·44	0·52	1·70	3·24
Stud-breds	7	1	4	...	5	10	0·14	0·57	...	0·70	1·42
Turkistans	1	...	1	2	4	7	..	1	2	4	7

27. On this subject the Superintendent, Civil Veterinary Department, North-Western Provinces and Oudh, remarks in his report: "Of the comparative merits of stallions as sires of stock fit for remount purposes, my experience during the past year has only still further confirmed my opinion that hackneys, particularly if pure bred, are far superior to other classes. Colonel Harvey, lately Commanding the 5th Royal Irish Lancers at Meerut, allowed me to inspect the troop horses of the regiment, which are almost all country-breds. .....I came to the conclusion that the majority of the horses, and in nearly every instance those pointed out by troop officers as being the best, were undoubtedly sired by hackneys. In the 7th Dragoon Guards a whole troop is horsed by country-breds, and I have been informed by the officers of the regiment that they did their work at least quite as well as Australians, and at the end of the Aligarh Camp of Exercise in December 1891 they compared most favorably in condition with the rest of the regiment." In another place he says: "I have heard it stated confidently that, although the hackney stock make a fine show of bone and substance as colts and fillies at the fairs and shows, when they reach adult age and are put to work they prove slow and break down prematurely. This is not borne out by the experience of the British regiment mounted on them." The experience of the several classes of horses gained at the Aligarh Camp of Exercise shows that the country-breds compare favorably with Australians. The subject is alluded to below in paragraph 58.

28. The Superintendent, Civil Veterinary Department, Punjab, states: "I noticed at the twelve different horse shows I attended that the Norfolk Trotter produce as a rule were well grown, strong animals, and almost invariably good movers. Possibly on the whole they were slightly deficient in quality, and some gave me the idea of being rather short in the neck; but as British Cavalry is now being mounted on country-breds, the fact must never be lost sight of that in marching order a medium cavalry troop horse is expected to carry 18 stones. Of the half bred English I know nothing, except that in England he is looked upon with great suspicion. Judging of those lately sent out to India, they seem to me to lack the good points of the hackney without possessing any of the advantages of the thorough-bred; and as it is a popular belief amongst large horse breeders in England that young stock take after their grand sires and dams, it cannot but be anticipated that the stock of this class of sire will not be everything we may desire."

29. I have to reiterate the opinion which I have on former occasions recorded, that the hackney stallion (under which head are included Norfolk Trotters, Roadsters, &c.) of good pedigree should be continued at stud in India. This class of stallion, though condemned by many men in India considered to have some knowledge of horses, is the one preferred in England, Europe, America, Australia, Africa, and Afghanistan for producing "general utility" horses.

30. The stock of Arabs out of mares sired by hackneys is well spoken of.

31. The country-bred sires are getting good stock. Endeavours are being made to obtain and employ more of this class of sire. Those having pedigrees on the side of both sire and dam only are purchased, and by careful selection of such stock the number of country-bred stallions will become in time a large one. Several of these sires are now being employed in lieu of the old class of malformed and hereditarily diseased animals itinerated by native stallion keepers.

Cost of keep, &c., of horse stallions.

32. Appendix VI (*vide* page 87) gives the cost of feed, keep, attendants, transit, &c., of Imperial horse stallions during 1892-93, and the table entered below shows the average cost per annum during the preceding 15 years :—

Years.	Bengal.	Bombay.	Years.	Bengal.	Bombay.
	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.
1877-78 ...	253 5 2	...	1885-86 ...	230 13 0	317 6 5
1878-79 ...	286 0 3	442 9 0	1886-87 ...	245 0 3	341 2 7
1879-80 ...	290 2 4	358 5 0	1887-88 ...	261 6 8	362 12 5
1880-81 ...	270 11 11	301 1 0	1888-89 ...	250 13 5	344 3 6
1881-82 ...	235 10 11	272 8 7	1889-90 ...	238 0 2	363 0 6
1882-83 ...	232 2 2	285 9 11	1890-91 ...	254 9 11	343 5 5
1883-84 ...	232 2 2	319 10 8	1891-92 ...	289 15 6	385 12 2
1884-85 ...	228 13 3	339 5 2	1892-93 ...	278 2 5	395 3 8

33. The Bombay Presidency thus shows an increase of Rs. 9-7-6 over last year's average. This is mainly due to dearness of grain and fodder. The average has decreased by Rs. 11-13-1 in Bengal, and this is due to grain having been plentiful.

Branded mares: Number of—

34. On the 31st March 1892 the registers of branded mares showed the numbers as given in the following tables :—

Presidency.	Province.	Branded mares. Horse-breeding.	Branded mares. Pony-breeding.	Total.
Bengal ...	North-Western Provinces ...	4,243	...	4,243
	Punjab	8,159	...	8,159
	Rajputana	...	...	...
Bombay ...	Deccan	1,313	5,891	7,204
	Guzerat	1,044	1,233	2,277
	Sind and Cutch	2,315	284	2,599
	Baluchistan	1,027	18	1,045
	TOTAL ...	18,101	7,426	25,527

35. During the year under report the number of mares as below were added to the registers :—

Presidency.	Province.	Branded and registered. Horse.	Branded and registered. Pony.	Received from other districts. Horse.	Received from other districts. Pony.	Total.
Bengal ...	North-Western Provinces	419	...	...	...	419
	Punjab	700	...	...	...	700
	Rajputana	...	...	...	...	...
Bombay ...	Deccan	236	247	...	...	483
	Guzerat	33	57	...	...	90
	Sind and Cutch ...	131	81	...	...	212
	Baluchistan	140	4	...	...	144
	TOTAL ...	1,659	389	...	...	2,048

36. The standard of mares was raised this year in consequence of strict injunctions from the office of Inspector-General, Civil Veterinary Department, not only to secure the best mares, but on account of the paucity of stallion power not to have the horses at stud over-taxed, and most careful selection of only those possessing good brood points was made.

37. The table beneath gives the numbers removed from the registers for various reasons:—

	Bengal.	Bombay.		Total.
	Horse	Horse.	Pony.	
Died	529	303	795	1,627
Sold	499	275	826	1,600
Transferred to other districts	...	...	...	...
Stolen	33	...	...	33
Struck off register	4	...	...	4
Total ...	1,065	578	1,621	3,264

38. The balance remaining on the 31st of March 1893 is shown below. Details will be found in Appendix VII (*vide* page 92):—

Presidency.	Province.	Horse-breeding.	Pony-breeding.	Total.
Bengal ...	North-Western Provinces ...	4,376	...	4,376
	Punjab	8,387	...	8,387
	Rajputana	190	...	190
Bombay ...	Deccan	1,029	4,696	5,725
	Guzerat	1,019	1,111	2,130
	Sind and Cutch	2,446	365	2,811
	Baluchistan	1,167	22	1,189
	Total ...	18,614	6,194	24,808

39. During the year 1,119 mares were branded in Bengal and 540 in Bombay. At first sight it would appear by the total number of mares present at the end of the year being only 24,808 against 25,527 last year that horse-breeding is on the decline; but the reason why the total of this year is less is owing to a strict census of branded mare stock having been taken during the year in Bombay with the result that 2,199 were found to no longer exist, and so were removed from the register; but as the number of mares branded during the year is 1,659 compared to 1,231 last year, it is evident that breeding is not on the wane.

40. More mares might have been added to the registers under this heading in the North-Western Provinces had it not happened that the autumn fairs and the heavy rains interfered with the movements of the Superintendent, Civil Veterinary Department, and prevented him from visiting many promising tracts of country, and so mare owners had not the opportunity of bringing newly purchased mares for branding.

41. The mares branded in the Punjab are said to be of exceptional quality and stamp. The Superintendent, Civil Veterinary Department, in his report states as follows :—"I noticed in some of the districts—notably Shahpur, Dera Ghazi Khan, Bannu, and Ferozepore—that the mares are remarkably well grown and well cared for; in fact, those of Shahpur and Dera Ghazi Khan would, I think, compare very favorably with brood mares seen at the various Agricultural Shows in England."

42. The difficulties experienced in striking mares unfit for brood purposes off the register remain unchanged. It is hoped that when the Civil Veterinary Department is in working order, we shall be able to obviate them to a very great extent.

43. With regard to mares, the Superintendent, Civil Veterinary Department, Bombay, remarks : " During the past year my Inspectors have gone carefully through the following districts :—Poona, Ahmednagar, Dharwar, Nasik, Satara, Ahmedabad, Belgaum, and Bijapur. The result has been that the actual number of branded mares present, instead of being (13,972) as shown in the last year's administration report, amounts to only 11,773, showing a decrease of 2,199 due to sales, deaths, and other casualties. This alone is, I think, sufficient reason for adopting some such return as I have suggested, *i.e.*, a village return by which the number of branded mares could be checked and accurate statistics recorded. The services of Inspectors are not utilized in Sind, Baluchistan, Khandeish, and Cutch, so I am unable to check these districts in the same way as I have the above. But I am of opinion that Sind, Baluchistan, and Cutch would show an increase and Khandeish a slight decrease. There are a number of old worn out mares in this presidency still on the register, and I would suggest that a complete muster be made once in every three years throughout the horse-breeding districts."

44. With regard to Bengal, in the year 1889-90 the Inspectors in the various districts verified the registers, and found that 4,942 mares had to be removed from the list on account of deaths, sales, &c. The Governments of the North-Western Provinces and Oudh and the Punjab have kindly consented to patwaris of villages assisting the Civil Veterinary Department in obtaining reliable returns of each mare covered and foal born in their respective villages, and thus it may be expected that more reliable returns will be forthcoming. The returns under these heads, hitherto received through zilladars employed, have been meagre and unreliable.

Number of mares covered.

45. The number of branded mares covered by Government stallions during the past 15 years is as given below :—

Years.	Bengal.	Bombay.	Years.	Bengal.	Bombay.	Central Provinces and Berar.
1878-79 ...	4,260	1,825	1886-87 ...	9,862	2,765	...
1879-80 ...	5,145	1,881	1887-88 ...	8,628	3,578	...
1880-81 ...	6,005	2,185	1888-89 ...	8,550	3,282	...
1881-82 ...	7,020	2,403	1889-90 ...	8,271	3,113	...
1882-83 ...	8,357	2,508	1890-91 ...	8,061	3,270	...
1883-84 ...	9,280	1,792	1891-92 ...	8,477	3,087	...
1884-85 ...	9,984	1,884	1892-93 ...	7,598	3,109	426
1885-86 ...	10,310	2,307	...	...	...	...

46. This shows a considerable decrease in Bengal, which is accounted for by the fact that only 175 stallions were employed against 194 in the preceding year. A slight increase is noted in Bombay owing to a proportionate increase in stallion power.

47. To facilitate reference, the average number of mares covered in 1891-92 and 1892-93 are given. Details will be found in Appendix VIII (*vide* page 94):—

Presidency.	1891-92.	1892-93.
Bengal	43·92	43·42
Bombay	34·81	31·62

48. It will be seen from this that the average is but slightly different from last year. If to the numbers given above we add 20 per cent. for unbranded mares covered with the connivance of native subordinates of the department, and for branded mares whose owners are afraid to have the leaps registered, we shall probably arrive at a fair estimate of the work performed by the Imperial stallions. Here again a hope may be recorded that when the assistance of patwaris of villages is rendered with regard to recording coverings and births of foals, more reliable statistics will be afforded.

49. The above paragraph applies equally to the table here given, of the percentage of produce foaled to mares covered, and the average of foalings per stallion for the last two years. Zamindars frequently fear to let it be known that their mare has had a foal to a Government horse as they wrongly think it might be seized by the authorities, so they bribe the zilladar or darinda to report the mare as not having held, and hence we get no information of the results of the covering of unbranded mares or of those branded ones whose coverings are not registered :— Produce; Number of—

Presidency.	Percentage of produce to mares covered.		Average of produce per stallion.	
	1891-92.	1892-93.	1891-92.	1892-93.
Bengal	30·12	31·07	11·88	13·28
Bombay	40·76	42·24	10·80	13·86
Central Provinces and Berar	...	60·85	...	6·0

50. It will be noted that the average produce per stallion in the Central Provinces and Berar is very low. The results of many of the coverings are unknown, and the records have possibly not been kept with that accuracy which is desired. It is hoped, however, that with the introduction of the Civil Veterinary Department more accurate details will be obtained. The newly appointed Superintendent, Civil Veterinary Department, Central Provinces and Berar, will tour through the districts during the cold season, and will endeavour to enlist the co-operation of district officers in the matter, so that we may expect to be able to show better results next year.

51. An abstract from Appendix IX (*vide* page 95) showing the number of country-bred remounts purchased during the last two years is given below :—

	Bengal.		Bombay.	
	1891-92.	1892-93.	1891-92.	1892-93.
Army Remount Department	339	591	56	47
Bengal Native Cavalry	1,182	849	...	...
Punjab Native Cavalry	307	302	...	...
Police Department	94	90	92	98
Bombay Native Cavalry	...	...	101	206
Total ...	1,922	1,832	249	351

52. The Army Remount Department purchased a greater number than last year. The same remarks as those made last year with reference to the breeds of remounts purchased apply to this year as quoted below :—

"It will be noticed in Appendix VII that only a comparatively small number are shown as the produce of Government stallions, but this is not reliable. Produce certificates are continually lost or retained by the breeder when he sells his stock. Add to this the facts noted in paragraphs 25 and 26 of this report, and it will be easily understood how hundreds of horses, the produce of our stallions, are yearly bought as indigenous. I am of opinion from repeated inspections of the stock at Hapur and Kurnal that, in Bengal at all events, very few indigenous animals are purchased for the rearing depôts."

53. I have to tender my thanks to the purchasing officers of the Army Remount Department for having recently given liberal prices for young stock and remounts purchased by them. This action on the part of the Remount Department is a most practical way of fostering horse-breeding operations.

54. There has been of late years a desire on the part of Native Cavalry to obtain remounts of a height greater than that considered sufficient by the authorities; also to bar the purchasing of odd colored horses, such as grey, pie-bald, &c. It is hoped that horses of 14-1, if of a proper stamp, may in future be accepted; also that greys especially may not be refused. With regard to grey horses having been considered objectionable, the reporting district officer at the Pokhur Horse Fair in 1892 states as follows :—

"Of the total number of horses and mares, only 75 and 26 respectively were reported to be fit for military purposes. Very few of these, however, were considered suitable for Native Cavalry, as evidenced by the small number of remounts purchased, and by the fact that none of the officers buying were able to get as many horses as they required. The Gwalior and Indore Imperial Service Cavalry bought several horses, but they all appeared to be more or less undersized. It seems a pity that horses of a grey color are so generally rejected by Native Cavalry. The color is very common, and many otherwise valuable remounts are thus lost."

Improvement in stock.

55. I doubtless may be stated that horse stock in the breeding districts of India has during the last 16 years much improved in stamp. Indeed, that horses in numbers now are obtainable which in former years could but seldom be found. During recent years the Native Cavalry have become converted into *Regular* Cavalry, and no longer can the Irregular Cavalry soldier on his small light-limbed, and often motley colored, horse be met with. I believe I am right in stating that not infrequently the present Silladar Cavalry man with his kit, &c., weighs 16 stones, and he has to go through a very regular course of drill, which the old Irregular Cavalry soldier had not to do. So Native Dragoon like has the Native Cavalry man been made that, unless he were well mounted, he could never perform the duties now-a-days expected from him. Therefore it may be accepted that, unless he had become well mounted, we should not hear of his present efficiency.

56. There are European officers of this branch of the service who hold the opinion that the present cavalry soldier is no better mounted than the old irregular soldier was; but this opinion can only be held by men who never had experience in the old Irregular Cavalry times.

57. Colonel J. H. Grey, C.S.I., with regard to the improvement of stock, in a letter addressed to me, states as follows :—

"Between 1857 and 1864 I had the opportunity of observing the quality of horses in the Native Cavalry. I served both in the Punjab and Bengal Cavalry, and in 1861-63 I had much to do with remount business. Ever since I have left the Cavalry, I have observed that branch with much interest, and for some years past I have marked the great improvement in the quality of their horses since my days. In my time horses were of two classes—

"(1) The weedy Hindustani country-bred with plenty of blood, but no bone. These possessed endurance hardly to be expected from their defective shape, but they were quite unequal to carrying weight.

"(2) The Northern horse, either what is known as Kabuli, or the coarse, heavy-crested, under-limbed Punjabi horse. This animal was strong enough, but being very under-bred, it failed in endurance from want of blood.

"Both classes were troublesome in the ranks. The stallions were exceedingly pugnacious and noisy, and many of the mares were intemperate We certainly did get wonderful work out of our cattle on service notwithstanding these disadvantages, but we rode lighter than troops do now. Certainly we mounted ourselves within the average 'chanda' of Rs. 200, but I regard the remounts of that day as dear in comparison with what we can now get at from Rs. 250 to 300

"An experienced cavalry officer, while admitting the general correctness of my view, once said to me that he did not think remounts now-a-days have such good constitutions as those formerly procured. This may doubtless *appear* to be the case, because the cavalry is now worked so very much harder than of yore. The ranks of many Bengal Cavalry regiments in old days were filled with old horses which lasted on, because the work generally consisted of a daily parade and no more. In the Punjab Cavalry, where in early days outpost duty was heavy consequent on frequent raids, we got through our horses pretty fast.

"I have above stated facts as I have observed them. The conclusion which I draw from them is that there is an immense improvement in the quality of the stock bred in the country owing to three causes—

"(*a*) The provision of high class stallions;

"(*b*) Care in the selection of mares to which the services of these stallions are available;

"(*c*) The encouragement to horse-breeding in the numerous fairs and the prizes offered for good stock."

58. The remarks of the Inspector-General of Cavalry regarding country-bred remounts, as noted in his report No. 444, dated 26th December 1891, are quoted below :—

"The small compact horses lasted far better than the big ones. Most of the Australians over 15-2 were much pulled down at the close of the manœuvres. The country-bred horses of the 5th Lancers did excellent work. The regiment is now almost entirely mounted on this class of horse; they compare most favorably with Australians, and, as is well known, thrive far better on service when on short rations.

"It is worthy of remark that the regiment that I reported last year as the best drilled regiment in India had the fewest casualties at the close of the manœuvres, only 4·32 per cent."

59. It may be accepted that with few exceptions the young remount stock in Hapur, Kurnal, and Ahmednagar are the produce of Government stallions and mares branded by the Civil Veterinary Department. It is in contemplation to mount more British Cavalry on country-bred stock, as from time to time a greater number can be issued from the Remount Depôts.

Number of colts castrated.

60. In Appendix X (*vide* page 96) will be found the number of horse and mule colts, the property of zamindars and other breeders, castrated by Government salutries during the year. The statistics for the last 17 years are given below :—

Years.	Bengal.	Bombay.	Years.	Bengal	Bombay.
1876-77 ...	38	...	1885-86 ...	1,138	122
1877-78 ...	122	..	1886-87 ...	1,363	68
1878-79 ...	255	...	1887-88 ...	1,211	76
1879-80 ...	425	...	1888-89 ...	1,273	98
1880-81 ...	551	...	1889-90 ...	1,303	72
1881-82 ...	782	11	1890-91 ..	1,248	127
1882-83 ...	913	71	1891-92 ...	1,602	320
1883-84 ...	950	129	1892-93 ...	1,444	326*
1884-85 ...	1,161	82			

* Besides these, the Ahmednagar salutri castrated 63 colts of the Remount Rearing Depôt at Ahmednagar.

61. The salutries in Bengal have been enjoined to be more energetic in the performance of their duties as castrators.

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SECTION I—MILITARY.

MULE BREEDING.

GOVERNMENT OF INDIA.

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SECTION I—MILITARY.

MULE BREEDING.

The number of donkey stallions on the register on the 1st April 1892 was as indicated in the table below :— Donkey stallions: Number of—

	Bengal.	Bombay.
Spanish	11	...
Arab	58	4
Home-bred	8	...
Country-bred	1	...
Bokhara	4	1
Punjabi	21	...
Italian	121	11
French	11	...
Persian	28	4
Cyprian	26	2
Khorasani	...	1
TOTAL ...	289	23

Increase during the year.

2. Those received since are shown in the following statement :—

	Bengal.	Bombay.
Received by importation	18	2
Omitted in last year's return	1	...
Purchased in India	1	...
By transfer from "donkey colts"	1	...
By transfer from Bengal	...	1
TOTAL ...	21	3

Decrease during the year.

3. The donkey stallions removed for various reasons from the registers are shown below :—

	Bengal	Bombay.
Died	11	...
Destroyed	6	1
Omitted from last year's return	3	...
Transferred to Bombay	1	...
Presented to His Highness the Maharaja of Sirmoor ...	1	...
Sold	...	1
TOTAL ...	22	2

4. The details concerning deaths and destructions will be found in Appendix XI (*vide* page 98). The casualties during the year were 5·88 in Bengal against 5·53 last year, and in Bombay 4·16 against 13·04 in last return. One donkey has been presented to His Highness the Maharaja of Sirmoor; and one donkey was sold from the Bombay Register as noted in Appendix XII (*vide* page 99).

Number of donkey stallions present.

5. The strength of donkey stallions as it stood on the 1st April 1893 is shown in the following table :—

	Bengal.	Bombay.
Spanish	10	...
Arab	48	3
Home-bred	8	...
Country-bred	1	...
Bokhara	4	...
Punjabi	22	...
Italian	136	13
French	11	...
Persian	25	5
Cyprian	23	2
Khorasani	...	1
TOTAL ...	288	24

6. In Appendix XIII (*vide* page 100) may be found the cost of the feed and keep of donkeys during 1892-93. The averages for the last 14 years are given below :— Cost of keep, &c., of donkey stallions.

Years.	Bengal.			Bombay.			Years.	Bengal.			Bombay.		
	Rs.	A.	P.	Rs.	A.	P.		Rs.	A.	P.	Rs.	A.	P.
1879-80 ...	181	1	5	...			1886-87 ...	133	8	11	230	14	9
1880-81 ...	141	1	4	...			1887-88 ...	148	3	1	291	7	7
1881-82 ...	105	9	2	...			1888-89 ...	131	11	2	260	0	6
1882-83 ...	107	11	1	233	9	0	1889-90 ...	124	13	3	270	5	5
1883-84 ...	116	3	5	194	4	8	1890-91 ...	129	1	5	272	5	10
1884-85 ...	119	7	11	240	13	10	1891-92 ...	144	8	7	254	3	3
1885-86 ...	122	12	1	202	15	6	1892-93 ...	147	0	6	290	14	3

This shows an increase in Bombay of Rs. 36-11-0 per head said to be due to dearness of forage.

7. The pony mares annually covered by Government donkeys during the last 10 years are as follows :— Pony mares covered.

Years.	Bengal.	Bombay.	Years.	Bengal.	Bombay.
1883-84 ...	11,153	209	1888-89 ...	15,723	890
1884-85 ...	12,551	294	1889-90 ...	16,530	821
1885-86 ...	16,091	338	1890-91 ...	16,713	868
1886-87 ...	16,272	616	1891-92 ...	16,564	1,019
1887-88 ...	15,551	819	1892-93 ...	14,766	846

8. A general statement will be found in Appendix XIV (*vide* page 103) giving the results of mule-breeding operations for 1892-93. A summary is given below :—

	Bengal.		Bombay.	
	1891-92.	1892-93.	1891-92.	1892-93.
Average number of mares covered per donkey stallion.	63·38	59·28	43·32	39·00
Total number of mules foaled during the year.	4,758	4,527	88	96
Percentage of mules foaled to mares covered.	30·11	30·26	19·86	15·16
Average number of mules foaled per donkey stallion.	18·58	18·23	4·6	6 38

9. There can be no doubt that the number of pony mares covered during the year was greater than last year. Very many of the donkey stallions in Northern India had to be recalled to depôt to prevent their powers being overtaxed. The returns are given as received, but they will remain unreliable until the system of village registration by patwaris recently sanctioned is in working order.

Demand for donkey stallions.

10. As noted in last year's report (paragraph 34), the demand for more donkey stallion power continues, and it is to be regretted that the indents on England for more jacks have not been fully complied with. Applications from district boards, &c., to be allowed to purchase donkeys could not be met owing to the paucity of Government jacks on the register. It was hoped that some would be imported from Northern Afghanistan and brought for sale to the Quetta Horse Fair, and it was recommended that Persian donkeys might be obtained through the agency of a Persian horse importer; but the Civil Veterinary Department were disappointed by not obtaining any from these sources. Unless more jack power be secured, mule-breeding cannot possibly be developed. As recorded above, the demand by mule-breeders for more donkey stallions remains pressing.

In this office letter No. 11-M.D., dated 15th February 1892, paragraph 4, I stated : " I avail myself of this opportunity of reiterating my earnest suggestions to have the sanctioned strength of donkey stallions raised from 300 to 600 by annual increments of not less than 50 in and after the year 1893-94, " and I still most earnestly advise that the number of jacks may be gradually increased.

In my letter No. 45-M.D., dated 9th September 1892, I wrote :—

" I have the honor to address you on the subject of the urgent demand that has been existing for more donkey stallion power in the breeding districts of the Punjab and North-Western Provinces and a few Native States, where there is a desire to purchase jacks for the purpose of mule-breeding.

" Consequent on my former recommendations, it was arranged in unofficial notes of April 1892 that the following donkey stallions be obtained :—

Italians	60
Persians	70
Country-breds	15
TOTAL ...	145

" Of these I learn from extract paragraph 10 of a Military letter from the Right Hon'ble the Secretary of State for India, No. 110, dated 11th August 1892, forwarded to this office with your Department endorsement No. 4159-D. of 3rd instant, that twenty Italian donkeys are being obtained and forwarded to India. The cause why only 20 of the 60 required are being supplied may rest on the fact that Mr. Sutherland, the purchasing officer of donkey stallions in Europe, experienced difficulty in obtaining in Italy so great a number as sixty.

No. 136-R. & A., dated 9th September 1892.

" If this be the case, I would solicit a reference to my suggestion in unofficial notes that Mr. Sutherland might be invested with the responsibility of obtaining suitable donkeys from other European countries, such as Central France and Catalonia, whence we have received through him very good donkeys, and that he would have a larger area of country to select from.

" I would therefore repeat my earnest advice that another indent for forty more European jacks may be submitted to the Right Hon'ble the Secretary of State for India as being most urgently required to meet pressing demands.

" With regard to the Persian donkey stallions required, I find no action has been taken, and so I venture to urge the importance of measures being at once adopted. I am informed that no officer has been deputed by the Government of India this year to purchase horses and mules in Persia, or I would advise that the seventy donkey stallions required from Persia might be purchased by that agency. But I hear that a contractor has been directed to purchase mules in Persia for the Government of India, and so I beg to advise that this contractor

may be requested to obtain twenty Persian donkey stallions according to the following standard measurements at the average price of Rs. 200 each :—

Height	From 12 hands to 13 hands 1 inch.
Color	Dark, not white.
Age	Not less than 3 and not over 7 years.
Girth	Not less than 52 inches.
Shank	Not less than 6¾ inches just under the knee.
Back	Straight, not hollow nor reached.

"I do not think it will be judicious to ask the contractor to obtain the full number, seventy, as he may not have the practical knowledge of the class of donkey sires required ; but, in the event of the twenty proving fit, he may then be requested to obtain the balance fifty.

"The fifteen country-bred donkey stallions I still advise may be secured by purchase in India, as I believe that number will probably prove available.

"A few years ago Persian donkey stallions were at my suggestion imported during two or three years by Arab dealers to Bombay. Some good animals were at first thus obtained; but the last batch or two were so indifferent that only a very few were found suitable, and so the dealers were disappointed in not being able to sell all to Government, and the importation ceased. But I will again endeavour during this winter's horse market in Bombay to arrange with some reliable Arab horse dealers to import Persian donkey stallions from the Persian Gulf to arrive in Bombay before March next."

11. It has been brought to the notice of the Government of India that probably useful donkey stallions may be obtained from Socotra and Somaliland. Endeavours have been made to purchase any country-bred jacks in Northern India, as many of the produce of Italian and Spanish donkeys already bought are proving good mule getters. It is satisfactory to note that not infrequently the best colts by Government donkeys out of donkey mares likewise by Government sires are kept by men in the Punjab for mule-breeding purposes. A small fee of Re. 1 to Rs. 2 is paid by mare owners.

Extension of mule-breeding.

12. The Superintendent, Civil Veterinary Department, Bombay, remarks : "It is only necessary to create a market for mules in the Deccan, and I feel sure that in the course of a few years the industry will establish itself and become popular."

The Superintendent, Civil Veterinary Department, Bengal, remarks : "There is only one part of Lower Bengal in which mule-breeding could be carried on, *viz.*, the Darjeeling district. Two good donkeys have been indented for—one for Kalimpong, and the other for Sikkim,—and I feel sure that the people will readily take advantage of their services when available."

13. Efforts have been made to interest the Madras Government in the subject with a view to extending operations in that Presidency.

14. The Government in Burma have purchased two Persian donkey stallions for mule-breeding in selected provinces.

15. The desirability of extending mule-breeding throughout suitable districts in India has been brought to the notice of the Local Governments by the Government of India, Revenue and Agricultural Department, in a Circular letter marginally noted, which to facilitate reference is given as Appendix XV (*vide* page 104) to this report.

No. 21—113, dated 1st June 1893.

Donkey mares covered by donkey stallions.

16. The statement here given indicates the number of donkey mares covered by donkeys during the last ten years :—

Years.	Bengal.	Bombay.	Years.	Bengal.	Bombay.
1883-84	800	...	1888-89	672	...
1884-85	893	...	1889-90	784	...
1885-86	761	29	1890-91	943	...
1886-87	881	9	1891-92	1,057	...
1887-88	658	...	1892-93	767	...

Here again the return cannot be considered trustworthy.

REMARKS.

1. This being the last annual report which I shall have the honor to submit to the Imperial Government, I beg to record my opinion that as the Indian bred horse can work and thrive in any country and climate, and that the British troop horse cannot stand hard work in a tropical climate, it is obvious that horse-breeding in India should be so fostered and supported by the authorities as to allow of all the troop horses required being bred and reared in India. Moreover, that there should be available a large number of horse stock outside the army, so that additional cavalry and artillery, if on an emergency sent out from England, could be mounted on Indian horses.

2. It is true that hitherto Australia and the Cape have supplied, and are still supplying, horses for India; but it is a well-known fact that they do not possess the hardiness and powers of endurance, nor can they bear the hardships and privations incident on war service, so well as the breeds of Arabia, Persia, and India. The advantage of having hardy Indian bred horses to meet the requirements for remounts to replace casualties on service in place of young and perhaps unacclimatised Australians must be evident. Surely, therefore, it is desirable that Government should adopt steadily and persistently measures by which India may in time yield not only all the horses required in time of peace, but also be prepared with a reserve in the breeding districts which would be available in case of war.

3. The Superintendent, Civil Veterinary Department, Bombay, states that "the stallions inspected at Sibi were in faultless condition." It is evident that the greatest care and attention has been paid to the welfare of these animals, and the best thanks of this department are tendered to the local officers for their cordial co-operation.

4. My best thanks have to be most gratefully recorded to those Veterinary officers who were my coadjutors in the Horse Breeding Department from 1876 to 1892, and to those officers of the Civil Veterinary Department since April 1892; and I would especially name Messrs. E. J. Batt, W. Lamb, and J. J. Meyrick; Veterinary Majors B. L. Glover, J. C. Dwyer, and G. J. R. Rayment; Veterinary Captain J. W. A. Morgan; and Veterinary Lieutenants H. T. Pease, F. B. Drage, and R. L. Cranford.

Also I record my thanks to the Veterinary Overseers Messrs. J. Burke, E. Burke, and H. C. D'Silva, who have performed their duties in a most willing and satisfactory manner.

As this is my last report, I deem it my duty to record my opinion on the Superintendent and several clerks of the Office of Inspector General, Civil Veterinary Department.

Mr. J. B. D'Silva was Head Clerk of the Office of the General Superintendent, Horse Breeding Operations, and on that Department merging into the Civil Veterinary Department, he became Superintendent of the Office. He has always conducted his duties in an earnest and most satisfactory manner, and I have to record my best thanks to him for the good work he has done during the last 18 years.

Mr. E. B. Roderick has been 12 years in the Office of Inspector General, Civil Veterinary Department, and General Superintendent, Horse Breeding Operations, and has worked willingly and well, and is fit for promotion.

Mr. A. R. D'Silva has likewise during the last 5 years served under me, and shown himself an able clerk and likely to prove worthy of promotion.

Messrs. E. T. D'Silva and Joseph DeSilva are promising clerks.

Rughbeer Singh, Munshi, performed his work satisfactorily, and has lately been transferred on promotion to the Office of Assistant to Inspector General, Civil Veterinary Department.

My best thanks are also due to all District Officers of the horse-breeding districts of the North-Western Provinces and the Punjab who, with their

multifarious duties, have most generously co-operated with the officers of the Horse Breeding and Civil Veterinary Departments in furthering and fostering the horse and mule breeding industry; without their help, so cordially given, the successful results attained could not have been reached.

5. It is believed that since the transfer of the Horse-Breeding Operations from the Military to the Revenue and Agricultural Department, the District Officers generally have shown a much greater interest in the operations than formerly, and are convinced of the great importance of horse and mule breeding as agricultural industries, which it is necessary to support both on financial grounds and also with a view to providing the horse and mule stock required by the State and public, and thus to no longer allow of Indian money being sent to foreign countries for imported animals which can and should be spent at home.

J. H. B. HALLEN,

31st December 1893. *Veterinary Lieutenant-Colonel,*

Inspector General, Civil Veterinary Department.

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SECTION II.—REVENUE.

GOVERNMENT OF INDIA.

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SECTION II.—REVENUE.

OFFICERS.

During the official year 1892-93, the following officers were employed in the Civil Veterinary Department :—

Veterinary Lieutenant-Colonel J. H. B. Hallen, C.I.E.	Inspector-General.
Veterinary Lieutenant H. T. Pease	Assistant to Inspector-General.
Dr. A. Lingard	Imperial Bacteriologist.
M. K. Bamber, Esq.	Clinical Assistant to Imperial Bacteriologist.
Veterinary Captain R. W. Burke, up to November 1893	Superintendent, Madras.
Veterinary Lieutenant H. P. Turnbull, from 19th January 1894	
Veterinary Captain J. K. Grainger, up to 19th May 1892...	Superintendent, Bombay.
Veterinary Captain J. W. A. Morgan, from 20th May 1892...	
Veterinary Captain J. Mills	Principal, Veterinary College, Bombay.
Veterinary Captain W. D. Gunn	Superintendent, Bengal.
Veterinary Major G. J. R. Rayment... ...	Superintendent, North-Western Provinces and Oudh.
Veterinary Captain J. A. Nunn	Principal, Veterinary School, Lahore.
Veterinary Lieutenant H. A. Sullivan ...	Professor, Veterinary School, Lahore.
Veterinary Lieutenant F. B. Drage	Superintendent, North Punjab.
Veterinary Lieutenant R. L. Cranford ...	Superintendent, South Punjab.
Veterinary Lieutenant H. P. Turnbull, up to October 1893	Superintendent, Derajat and Baluchistan.
Veterinary Lieutenant H. M. Maxwell, from 5th February 1894	
Veterinary Captain F. J. Short	Superintendent, Central Provinces and Berar.
Veterinary Lieutenant G. H. Evans... ...	Superintendent, Burma.
Veterinary Captain W. R. Hagger	Principal, Veterinary School, Ajmere.

SECTION II.—REVENUE.

HORSE-BREEDING DEPARTMENT.

SECTION II.—REVENUE.

HORSE-BREEDING DEPARTMENT.

During the official year 1892-93 the primary duty of the following officers of the Civil Veterinary Department has been in connection with horse and mule breeding:— **Officers.**

Veterinary Major G. J. R. Rayment... ...	North-Western Provinces and Oudh
Veterinary Captain J. K. Grainger, up to 19th May 1892	Bombay.
Veterinary Captain J. W. A. Morgan, from 20th May 1892	Bombay.
Veterinary Lieutenant F. B. Drage	North Punjab.
Veterinary Lieutenant R. L. Cranford ...	South Punjab.

2. A report on the horse fairs and shows held during the year has already been submitted. The sums given as prizes by the Imperial Government to horse stock at these gatherings are detailed below:— **Horse Fairs and Shows.**

NORTH-WESTERN PROVINCES.

	Rs.	A.	P.
Aligarh Horse Show	1,000	0	0
Batesar Horse Fair	150	0	0
Bulandshahr Horse Show	1,250	0	0
Etawah Horse Show...	250	0	0
Meerut (Nauchandi) Horse Show...	1,700	0	0
Muzaffarnagar Horse Show	1,000	0	0

PUNJAB.

Amritsar Horse Show	550	0	0
Delhi Horse Show	250	0	0
Dera Ghazi Khan Horse Show	1,800	0	0
Bannu Horse Show	250	0	0
Dera Ismail Khan Horse Show	250	0	0
Gujrat Horse Show	1,250	0	0
Jellalabad Horse Show	1,000	0	0
Jhang Horse Show	400	0	0
Kurnal Horse Show	650	0	0
Lahore Horse Show	1,000	0	0
Multan Horse Show	1,800	0	0
Rawalpindi Horse Fair	1,700	0	0
Shahpur Horse Show...	1,600	0	0
Sialkot Horse Show	250	0	0
Umballa Horse Show	250	0	0
Hansi Horse Show	300	0	0

RAJPUTANA.

Tezaji Mule Fair	100	0	0
Pokhur Horse Fair	150	0	0

TIRHOOT.

Sonepore Horse Fair	500	0	0

BALUCHISTAN.

Quetta Horse Show	500	0	0
Sibi Horse Show	1,000	0	0

3. The money expended in prizes at the various shows in Bombay Presidency is shown below :—

	Rs.	A.	P.
Ahmedabad	2,269	0	0
Jacobabad	4,485	0	0
Sibi	2,515	0	0
Ahmednagar	1,789	0	0
Naushahro	1,750	0	0
Quetta	869	0	0
Total ...	13,677	0	0
Add other expenses	4,514	12	5
GRAND TOTAL ...	18,191	12	5

4. Of the above, Rs. 5,000 came from Provincial sources, Rs. 1,500 from the Imperial Government, and the remainder, Rs. 11,691-12-5, were contributed by local funds and subscriptions.

District stallions.

5. Appendix I (*vide* page 109) shows the number of district stallions, horse, pony, and donkey, employed in the various districts of Bengal.

The Superintendent, Civil Veterinary Department, North-Western Provinces and Oudh, states: "Up to March 1st, 1893, sixty-four applications from the various districts in the North-West and Oudh have been received. It is encouraging to see that the project meets with such universal approval. In addition to District Board stallions, various wealthy native gentlemen in the Aligarh District have purchased, either through the Inspector-General or myself, eight horses, chiefly Arabs, for stud purposes to be used on their estates or in the surrounding villages. The District Board of Etawah have a stallion of their own, and I am given to understand that two Arabs have been purchased for the Fyzabad District. The Municipal Board at Firozabad have declared their intention of buying a stallion. There is also an Arab at the Government farm at Cawnpore purchased from the Civil Veterinary Department."

6. In the Punjab two horses, five ponies, and one donkey have been purchased during the year. This brings the total number up to twenty-one horse, eight pony and five donkey stallions present in the province. They are distributed as follows :—

District.	Horse.	Pony.	Donkey.
Ferozepore	1	...	...
Multan	1	...	1
Shahpur	1	2	...
Jhang	1	...	...
Peshawar	1	...	...
Gurdaspur	2	...	...
Muzaffargarh	2	2	...
Sialkot	...	2	...
Umballa	12	2	4
TOTAL ...	21	8	5

7. The North-Western Provinces and Oudh District Boards have realized the benefit in the matter of improving the horse stock which is likely to result from the employment of these selected stallions for covering the mares not up to the standard for Imperial stallions. That the infusion of Arab blood will be beneficial there can be no reasonable doubt. It may be expected that the produce from this source will yield a certain percentage of fillies equal to

being brought on the list of approved and branded mares for Imperial stallions, and thus the stock generally throughout breeding districts will be increased in number and value.

8. The demand for this class of sire is daily increasing, and so it may be hoped that by these means horse-breeding will gradually extend.

Stamp of stallions employed.

9. The stamp of animal chiefly bought is a sound, strong Arab. The Superintendent, Civil Veterinary Department, North-Western Provinces and Oudh, remarks: "All the animals purchased, as far as conformation and soundness are concerned, leave little to be desired considering the prices paid. Many, indeed, are of quite a superior class, and we may consider ourselves fortunate in having secured them. Of their capabilities as foal-getters I have had as yet hardly a chance of judging, as it will be observed that four horses only have been issued up till the end of the year. They were all tested in depôt before issue, and proved themselves, without exception, ready coverers—a fact on which we may congratulate ourselves."

10. The Superintendent, Civil Veterinary Department, Punjab, remarks: "Surely every district in the Punjab should have its own stallion to improve the breed by crossing with mares unfit to mate with Imperial stallions. Possibly the day is not far distant when each tehsil will have a stallion." This is not unlikely when we consider that the inhabitants of the Punjab are for the most part a race of horsemen, and will doubtless soon recognize the importance of the subject, and will urge upon the District officers and Local Boards to assist them in this direction.

District mares.

11. Appendix II (*vide* page 110) shows the number of district branded and unbranded mares in Bengal. An abstract is given below :—

	Unbranded mares.		Branded mares.	
	1st April 1892.	1st April 1893.	1st April 1892.	1st April 1893.
North-Western Provinces and Oudh	8,075	25,254	2,559	2,730
Punjab	23,136	24,039	1,741	1,808
Total ...	31,211	49,393	4,300	4,538

12. From this it will be seen that an enormous increase is shown in the North-Western Provinces and Oudh, and this is owing to the fact that last year many forms were returned blank. The figures may be taken as approximately correct, and they show what an enormous field is being opened up by the introduction of District Board stallions.

Coverings and foalings.

13. Appendix III (*vide* page 112) gives the results of the year's operation in the Bengal Presidency.

Feed.

14. Appendix IV (*vide* page 113) gives the cost of feed and keep of district stallions during the year under report. The general average has fallen in the Punjab and risen in the North-Western Provinces and Oudh.

Sale of stallions.

15. No animals have been sold during the year.

Casualties.

16. One pony stallion died of pneumonia at Sialkot during the year under report.

Comparative merits of the stallions.

17. The stallions are nearly all Arabs, this breed being considered the best for the purpose of mating with small mares.

Demand for stallions.

18. See paragraph 5 headed "District Stallions."

Tours of the Officers of the Department.

19. The Inspector-General, Civil Veterinary Department, in April attended the Umballa Horse Show; was present at Muzaffarnagar and Umballa for the inspection of brood mares and young stock by the Hon'ble Military

Member of Council, Lieutenant-General H. Brackenbury, C.B.; inspected stallions, stables, and the Instruction farm at Babugarh; then proceeded to Simla, where he remained on duty with the Government of India until the 21st of May, on which date he availed himself of 60 days' privilege leave. On 7th July was ordered to proceed to Hungary on special duty for the purpose of purchasing stallions for the Government of India. Arrived in Bombay on 7th August, and received charge of his office on 8th idem. Then he visited Poona to inspect the Bacteriological Laboratory there, interviewed Colonel Biddulph at Gwalior on horse and mule-breeding matters, went to Ajmere to select a site for a veterinary school, and visited Babugarh to inspect the stallions, stables, and Instruction farm.

In September he interviewed the Deputy Commissioner at Umballa on horse and mule-breeding matters, and inspected the Government stallions and stables, also those belonging to the District Board. Arrived in Simla on 5th, and remained there on duty with the Government of India until the end of the month.

In October Quetta Horse Show and Pokhur Horse Fair were attended; horse stallions offered for sale at Jacobabad inspected, and Babugarh visited to inspect stallions and stables.

During November Ahmednagar Horse Show was attended and Bombay and Indore were visited for the purpose of purchasing suitable stallions for the Government of India and District Boards, &c.

In December he proceeded to Calcutta on duty with the Government of India, visited the grass farm at Allahabad, and was present at Babugarh for the winter class of technical instruction.

In January the Jellalabad Horse Show was attended; he visited Babugarh to inspect stallions, stables, and Instruction farm, and went to Calcutta on duty with the Government of India.

In February the Delhi and Aligarh Horse Shows were attended; he inspected the stallions and stables at Babugarh; then proceeded to Bombay to buy Arab stallions.

During March he attended the Sialkot, Jhelum, and Shahpur Horse Shows and Dinanagar Cattle Fair; inspected stallions and stables at Babugarh, and proceeded to Ajmere to select a site for the Veterinary School.

20. The Inspector-General, Civil Veterinary Department, travelled 17,676 miles by rail, 685 miles by road; attended 11 horse fairs and shows, and spent 55 days under canvas.

21. The Superintendent, Civil Veterinary Department, Bombay, after taking charge of his office on 20th May, remained at head-quarters until 9th of June, when he went to Poona to confer with Director of Land Records and Agriculture and purchase stallions. During July, August, and September he visited Ahmedabad, Kaira, and Bombay to inspect Veterinary Dispensaries, confer with the Collectors, and purchase stallions. In October the Quetta Horse show was attended, and Jacobabad and Shikarpur were visited for the purpose of branding mares.

A tour was made in November and December in the Ahmednagar, Poona, and Sholapur districts; the Ahmednagar Horse Show attended; and Babugarh visited during the time of the winter technical class of instruction. He inspected the Saharanpur Depôt, and visited Bombay to purchase stallions.

During January and February the Jacobabad, Chinchli, Naushahro, and Ahmedabad Horse Shows were attended and the Kurnal Depôt inspected.

March was spent in branding mares in the Ahmednagar and Poona districts.

22. During the year under report Veterinary Major G. J. R. Rayment, Superintendent, Civil Veterinary Department, North-Western Provinces and Oudh, attended the Muzaffarnagar and Umballa Shows in April; those of Gurmukhtesar, Batesar, Hansi, and Etawah in October and November, while the usual shows were attended in the spring. During the touring season he inspected stands and branded mares in the Aligarh, Etawah, Agra, Kurnal, Multan, Meerut, Rawalpindi, Hissar, Gurgaon, Delhi, Muzaffarnagar, Saharanpu, and Bulandshahr Districts. In the absence on leave of Veterinary Colonel Hallen he officiated as Inspector-General, and performed the duties of Superintendent, Punjab, Veterinary Major Kemp being away on medical certificate. In September he was ordered to Naini Tal, His Honor the Lieutenant-Governor wishing to consult him as to the future operations of the Department. He travelled 5,199 miles by rail, 1,605 miles by road, and was under canvas 135 days.

23. Veterinary Lieutenant F. B. Drage, Superintendent, Civil Veterinary Department, Punjab, assumed charge of his office on 15th August, and commenced his tour, visiting the districts of Rawalpindi, Bannu, Lahore, Peshawar, Dera Ismail Khan, and Multan. A portion of the Gurdaspur district was also inspected. He attended the horse fairs and shows of Amritsar, Jhang, Dera Ghazi Khan, Bannu, Lahore, Rawalpindi, Dera Ismail Khan, Multan, Shahpur, and Gujrat. He travelled 6,504 miles by rail, 1,277 miles by road, and was 91 days under canvas.

24. The original statement received from the Comptroller of India Treasuries showing the cost of the Department for the year under report, amounting to Rs. 2,66,852-10-7, is herewith attached. The following amounts should, however, be deducted from the above amount, as provision for these items was not made in the Civil Veterinary Department budget:— Cost of the Department.

Expenses incurred—

	Rs.	A.	P.
In Central India	1,345	6	3
Baluchistan—Pay of salutri	550	14	2
Ditto —Travelling allowances of officers...	120	10	6
TOTAL ...	2,016	14	11

25. The net expenditure for 1892-93, therefore, amounts to Rs. 2,64,835-11-8 against Rs. 2,81,762-13-1 during 1891-92, showing a decrease of Rs. 16,927-1-5.

26. In accordance with orders contained in Military Department letter No. 2049-D., dated 18th May 1889, the prices paid for stallions received from England have been added as shown below:—

	Rs.	A.	P.
Cost of the Department in Bengal, as explained in preceding paragraph	2,64,835	11	8
Price of 35 stallions imported from England, £ 9,975 @ 1s. 4¾d. per rupee ...	1,42,925	5	11
TOTAL ...	4,07,761	1	7
Cost of the Department in Bombay	68,268	3	9
Price of two stallions imported from England, £ 570 @ 1s. 4¾d. per rupee ...	8,167	2	7
TOTAL ...	76,435	6	4

27. The total cost of the Department in Bombay as compared with the year 1891-92 shows a decrease of Rs. 1,501-0-3. The outlay has been divided under the following sub-heads :—

	Rs.	A.	P.
Cost of supervision	12,788	0	6
Keep and purchase of stallions	48,980	3	3
Prizes at horse shows	6,500	0	0
TOTAL ...	68,268	3	9

of which Rs. 14,145-3-11 is charged to local funds, Rs. 11,005-1-8 debited to the Government of India for maintenance of stallions in Baluchistan and grants of prizes at Sibi and Quetta Horse Shows, and the balance, Rs. 43,117-14-2, is paid from Provincial revenues.

28. The grand total cost of the Department, including Bombay, was Rs. 4,84,196-7-11 in 1892-93 against Rs. 4,25,688-3-10 in 1891-92.

SECTION II.—REVENUE.

VETERINARY COLLEGES AND SCHOOLS.

VETERINARY COLLEGES AND SCHOOLS.

The primary duty of the following officers is veterinary education :— **Officers.**

Veterinary Captain J. Mills, Principal Veterinary College, Bombay.

Veterinary Captain W. D. Gunn, Superintendent, Civil Veterinary Department, Bengal.

Veterinary Captain J. A. Nunn, Principal, Veterinary School, Lahore.

Veterinary Lieutenant H. A. Sullivan, Professor, Veterinary School, Lahore.

Veterinary Lieutenant G. H. Evans, Superintendent Civil Veterinary Department, Burma.

Veterinary Captain W. R. Hagger, Principal, Veterinary School, Ajmere.

2. As no record is available of the dates when the several Veterinary Colleges and Schools were established, it is deemed advisable to record the following history of each of the several institutions.

3. The first school which was instituted was the Army Veterinary School at Poona in the year 1862 at the suggestion of Staff Veterinary Surgeon J. H. B. Hallen, Principal Veterinary Surgeon of the Bombay Presidency. This officer superintended and worked the school during his tenure of the appointment of Principal Veterinary Surgeon, Bombay. **Army Veterinary School, Poona.**

Officers, European and Native, of the Bombay Army, as well as farriers and non-commissioned officers, were allowed to attend the course of instruction. District Officers were permitted to send nalbunds for instruction in farriery in the forge of the school. This school has been carried on very successfully since its foundation, and is at present in a very flourishing state.

4. This school was proposed and organized by Inspecting Veterinary Surgeon J. H. B. Hallen, the General Superintendent, Horse-Breeding Operations, in the year 1877, for the purpose of educating men for the position of salutris and castrators in the horse and mule-breeding districts of Northern India. **Hapur School.**

Mr. Hallen was ably assisted by 1st Class Veterinary Surgeon E. J. Batt and Mr. J. Burke, Veterinary Overseer, in the working of the school. Practical salutris and castrators were issued on certificate as such, and have proved of service in the districts. The school was closed on the inauguration of the Lahore Veterinary School, and 35 students were transferred to the latter institution to complete their education.

5. As the Army Veterinary School at Poona had proved a boon to the Bombay Army in instructing officers and men in the principles of veterinary surgery, medicine, and farriery, Mr. Hallen suggested the establishing of a veterinary class during the summer of 1888 at Simla, and received the valuable co-operation of Inspecting Veterinary Surgeon G. A. Oliphant, F.R.C.V.S., Principal Veterinary Surgeon in India, and Mr. G. J. R. Rayment, F.R.C.V.S., Assistant Superintendent, Horse-Breeding Operations, North-Western Provinces and Rajputana. These three Veterinary officers delivered a course of lectures during that summer. The lectures were attended by members of His Excellency the Viceroy's Council, the Inspector General of Cavalry, Adjutant General in India, and most of the officers present in Simla. Several ladies also attended. The course was pronounced a success, and Mr. Hallen recommended to the authorities that these lectures to officers during the **Army Veterinary class, Simla and Umballa.**

summer at Simla and to non-commisssoned officers, farriers, &c., during the winter at Umballa should be sanctioned by the authorities, and become duly enforced.

These classes have since been continued under the orders of His Excellency the Commander-in-Chief in India.

Ajmere Veterinary School.

6. About the year 1881 Mr. Hallen, Inspecting Veterinary Surgeon, &c., recommended to the Government of India that instruction in veterinary matters should be given to the young native chiefs of the Mayo College at Ajmere in order that they might have some knowledge regarding the management, breeding, and rearing of horse and cattle stock, so that when reigning in their several States they might take an interest in such matters, and induce their subjects and tenantry to adopt the industries of cattle and horse-breeding on scientific lines, and so render valuable help in developing the revenues of their country.

7. Again a proposal to establish a veterinary school at Ajmere to allow native chiefs of Rajputana to send men for sound instruction in veterinary matters was made by Colonel G. H. Trevor, C.S I., Agent to the Governor General in Rajputana, and was warmly supported by Mr. Hallen in his letter No. 37 R. & A., dated 1st February 1891, to the Secretary to the Government of India, Revenue and Agricultural Department; and in the scheme for the organization of a Civil Veterinary Department in India, provision was made for a Veterinary officer of that department to preside over the institution.

8. Colonel Trevor warmly interested himself in the scheme, and addressed the several Darbars of Rajputana through the Political officers by circular, and had the pleasure of receiving replies which justified his saying that annual subscriptions to the extent of Rs. 6,504 had been promised to meet the cost of the scheme sketched in Mr. Hallen's printed letter No. 37-R. & A. above quoted. Moreover, that there would be no difficulty in raising a sum of Rs. 10,000 for the construction of the college buildings at Ajmere if required. Colonel Trevor adds "that the Commissioner of Ajmere, Colonel J. Biddulph, is strongly in favor of the proposed veterinary school. In fact, I have not heard a single dissentient voice."

9. The establishment of the veterinary school has accordingly been sanctioned by the Government of India. The necessary buildings are now being erected on a suitable site in a suburb of Ajmere; Veterinary Captain Hagger, C.V.D., has been appointed Principal, and a staff of lecturers will shortly be nominated. It is expected that the school will be formally opened by Colonel Trevor, Agent to the Governor-General of Rajputana, during the coming winter.

Veterinary School, Lucknow.

10. It is contemplated by the Lieutenant-Governor of the North-Western Provinces, Sir Charles Crosthwaite, K.C S.I., &c., on the recommendation of Veterinary Major G. J. R. Rayment, F.R.C.V.S., Civil Veterinary Department, &c., to establish a veterinary school at Lucknow, where the native chiefs are fully cognisant of the desirability of having such an institution to meet the demands for veterinary aid made by the agriculturists. This school will be available for the education of men of the several districts in Oudh and the North-Western Provinces.

Calcutta Veterinary Institution.

11. On the completion of their duties during 1869-71, the Cattle Plague Commissioners of India deemed it their duty to advise the Government of India to establish a veterinary college in Calcutta with a view to providing duly qualified native veterinarians for the cattle districts of Lower Bengal and Assam. As the ravages committed by contagious diseases common amongst cattle caused heavy loss to agriculturists and more or less marred the revenue interests, the President of the Commission, Inspecting Veterinary Surgeon J. H. B. Hallen, and his able coadjutor on the Commission, Dr. Kenneth McLeod, conjointly earnestly urged the necessity of the measure.

12. The Viceroy of India, Earl Mayo, possessed of much agricultural experience, warmly accepted their recommendations for the college to be established, and Mr. Hallen was empowered by the Government of India to select suitable premises for the institution. After the lamented death of Earl Mayo the project was abandoned, as Mr. Hallen's services were at the time required for duty with the Special Stud Commission then appointed.

13. No further action was taken in the matter until 1885, when a committee was assembled to report upon the proposal for a veterinary school. The members were—

President:

Dr. KENNETH MCLEOD.

Members:

Mr. J. H. B. HALLEN, I.V.S.

Mr. GREENHILL, V.S.

The Committee submitted a report again recommending the establishment of a school, and described a site suitable for it.

14. No further action was taken until the year 1891, when Babu Sheo Baksh Bagla very generously subscribed and paid to Government Rs. 30,000 in aid of the project, and besides offered 7¼ bighas of land for the site.

15. Sir Dinshaw Manockjee Petit, Bart, of Bombay, also promised a donation of Rs. 25,000 for the establishment of the hospital. His Honor the Lieutenant-Governor of Bengal sanctioned the naming of the institution as follows: "That it should, as a whole, be called the 'Bengal Veterinary institution' and the parts thereof (1) 'The Kenneth McLeod Veterinary School,' Babu Sheo Baksh Bagla being anxious to commemorate in this way Dr. Kenneth McLeod's labours in the cause of Veterinary Science; and (2) 'The Sir Dinshaw Manockjee Petit Veterinary Hospital.'"

16. The Committee for the organization of the school and hospital was—

(1) Mr. M. Finucane, Director, Land Records and Agriculture, Bengal.

(2) Babu Sheo Baksh Bagla.

(3) Mr. W. B. Gwyther, Executive Engineer; also to be Secretary.

17. These gentlemen have, with the assistance of Veterinary Captain W. D. Gunn (who has been appointed Principal), arranged and superintended the erection of the institution, which is now nearly completed. It is expected that it will be formally opened during the winter of 1893-94.

18. At the suggestion of Inspecting Veterinary Surgeon J. H. B. Hallen, this vernacular school was started. At first Simla was the proposed site, but His Honor the Lieutenant-Governor of the Punjab at the time (Sir R. Egerton, K.C.S.I.) decided that Lahore would be a better place. The following particulars have been furnished by the present Principal Veterinary Captain Nunn, D.S.O., F.R.C.V.S., &c.:—Inspecting Veterinary Surgeon G. Kettlewell, B.A., was appointed as Principal of the school, and reported himself for duty on the 23rd of December 1881; but it was not until the month of March 1882 that the students from the Hapur School were transferred to Lahore, and the business of education was really commenced. The above officer worked with **Lahore School.**

great energy and zeal in the school until the 1st July 1890, and it is chiefly to his exertions that the institution developed from the few "chappar huts" to the present thoroughly equipped school. The number of patients for treatment gradually increased during his tenure of office from 107 in 1882-83 to 1,338 in 1890-91.

19. In July 1890 Veterinary Captain Nunn, F.R.C.V.S., D.S.O., succeeded as Principal, and the school has under this officer continued to improve.

20. The total number of students, civil and military, who have obtained the diploma of the school since its foundation is 371, and all of these have found employment.

21. The following is the list of officers who have been connected with the institution since 1882:—

(1) Inspecting Veterinary Surgeon G. Kettlewell, B.A., Principal, from 23rd December 1881 till 30th June 1890.

(2) J. Burke, Assistant Professor, 27th March 1882 to 30th September 1887.

(3) Veterinary Captain J. A. Nunn, 1883 to December 1885 on special duty in the Punjab. As Principal from 1st July 1890 till present date.

(4) Veterinary Surgeon W. D. Gunn from 15th April 1887 till 13th July 1888 as Professor, Bovine Pathology.

(5) Veterinary Surgeon Henry T. Pease from 30th October 1888 till 19th May 1891 as Professor, Bovine Pathology.

(6) Veterinary Surgeon L. J. Blenkinsop from 13th July 1891 till 24th March 1893 as Professor, Bovine Pathology.

22. In addition to the European staff, there is a trained native staff of lecturers at the school who are most valuable, as the teaching is carried out in Urdu.

Bombay College.

23. In the year 1863 Mr. J. H. B. Hallen, Principal Veterinary Surgeon, Bombay Presidency, and Superintendent of the Army Veterinary School at Poona, suggested to the Government of Bombay the advisability of inaugurating a veterinary college and hospital in Bombay for the education of veterinarians in the civil districts of the Bombay Presidency. The heavy losses of cattle from contagious diseases proved the necessity of affording veterinary aid to the native agriculturist.

24 The subject was allowed to pend until the year 1886, when Mr. W. Lamb, Principal Veterinary Surgeon, Bombay Presidency, urged upon the Government to establish a school, and this was done. Veterinary Surgeon J. H. Steel, F.R.C.V.S., F.Z.S., &c., &c., was Principal.

25. The present Principal of the College, Veterinary Captain J. Mills, Civil Veterinary Department, has furnished the following brief history of the Bombay Veterinary College:—

College buildings.—The lecture rooms, resident officer's quarters, and Patho-Bacteriological Laboratory are the gifts of Sir Dinshaw Maneckji Petit, Bart. The museum, chemical laboratory, pharmacy, shoeing forge, examination shed, dissecting and post-mortem rooms, students' quarters, and other minor buildings were erected by Government at a cost of about Rs. 80,000.

Students.—The college opened with 69 students.

Principals.—Professor J. H. Steel, A.V.D., was the first Principal. He joined on the 25th May 1886, and served up to 5th December 1890, when he was compelled to take leave through sickness, and death claimed him on the 8th January 1891. Dr. S. K. Nariman, Assistant

Professor and Resident Veterinary Officer, acted as Principal from 6th December 1890 till 31st March 1891, when he was relieved by Veterinary Captain G. J. R. Raymont, who served up to 3rd August 1891. On the 12th August 1891 Veterinary Captain James Mills was appointed Principal, and still serves Veterinary Surgeon T. Pottinger also officiated as Principal.

Graduates.—Out of the 68 Licentiates of Veterinary Science and Graduates, 18 are in the service of Government, 18 in Native States, 13 under Local Fund Boards, 5 in private practice, 4 are studying at other colleges, and of 10 nothing is known as to how they are employed. For really good practical men there is no lack of employment whatever, and there are several appointments at present vacant, but no suitable men are available to fill them.

Hospital.—There is a large hospital for animals situated in the college compound, erected principally by the family of Sir Dinshaw Maneckji Petit, Bart, and managed by the Bombay Society for Prevention of Cruelty to Animals. The hospital consists of two stables to accommodate 50 horses, five cattle sheds with standings for 200 patients, one isolation shed, and kennels for 20 dogs. The college staff afford medical aid to the hospital in return for the clinical facilities afforded for teaching purposes.

Rangoon Veterinary School.

26. Rangoon possesses a veterinary school, established for the purpose of training Veterinary assistants for Government service in the various districts of upper and lower Burma, to work as cattle disease inspectors, under the Superintendent, Civil Veterinary Department.

27. The institution is under the able management of Veterinary Lieutenant G. H. Evans. The classes are held in Burmese language, and the men are thoroughly trained in inspection duties. They have proved of very great value in the suppression of outbreaks of contagious diseases, and will render still greater service when the Burma Cattle-disease Act is brought into operation.

Veterinary College and School, Madras Presidency

28. Madras is the only presidency remaining without, or without the promise of a veterinary college or school. The losses sustained annually by the native agriculturist of that presidency have been acknowledged as very heavy. Returns furnished a few years ago afforded evidence of this.

29. I submitted a letter (see Appendix V, page 114) to that Government urging the advisability of establishing a veterinary school in the city of Madras, where a large hospital for the reception of sick and lame animals would be considered a boon to cattle and horse owners, and would afford a grand field for the educating of veterinary students. The veterinary class attached to the Saidapet Agricultural College, 8 or 9 miles from Madras, and so out of reach of owners of sick and lame animals in the city, has proved a failure in providing practical native veterinarians, as the practice in the veterinary hospital attached to the Agricultural College has been so very limited. Moreover, the study of veterinary medicine and surgery requires the whole attention of a student, and he has no time to study strictly agricultural matters. The Royal Agricultural College of Cirencester does not attempt to educate practical veterinarians, but only to give agricultural students a knowledge of the general principles and practice of veterinary science. It appears to me strange that the Madras Government have not determined to inaugurate a veterinary school in Madras. The letter above quoted has been a second time brought officially to the notice of His Excellency the Governor of Madras in Council, and I much regret to find without any satisfactory result; indeed, as this report is going to Press, I regret to have to record the following:—

No 10-C, dated 5th May 1890.

Proceedings of the Government of Madras,—No. 3863; dated 20th October 1893.

Read the following:—

Proceedings of the Educational Department, dated 5th October 1893, No. 733, on letter from the Director of Public Instruction, Madras, dated 8th August 1893, No. 8929, submitting, with remarks, copy of a letter from the Principal, College of Agriculture, on the proposal to open a veterinary school in the city of Madras.

ORDER.—The proposal to establish a veterinary school and hospital in Madras town does not in the present state of affairs commend itself to Government; the idea must, therefore, be abandoned.

Order thereon by the Government of Madras.

Communicated to the Commissioner of Revenue Settlements and Director of the Department of Land Records and Agriculture.

A copy of these proceedings will be forwarded for the information of the Government of India, with reference to Sir E. Buck's letter No. 490-41, dated 3rd March 1893.

30. But I do most earnestly hope that despite the resolution above quoted, the necessity of establishing a Veterinary school in Madras may become acknowledged by the Madras Government.

SECTION II.—REVENUE.

Rules as to duties of Officers of the Civil Veterinary Department. Preparation of a conspectus of diseases. Preparation and submission of Annual Reports.

SECTION II.—REVENUE.

Rules as to duties of Officers of the Civil Veterinary Department. Preparation of a conspectus of diseases. Preparation and submission of Annual Reports.

Government of India, Revenue and Agricultural Department, Resolution No. 26-133, dated 4th July 1893 (*vide* Appendix VI, page 118), communicates instructions as to the duties of officers of the Civil Veterinary Department.

2. Government of India, Revenue and Agricultural Department, Circular No. 27-133, dated 4th July 1893 (*vide* Appendix VII, page 122), communicates instructions regarding the arrangements for the preparation of a conspectus of diseases to which animals in India are subject.

3. Government of India, Revenue and Agricultural Department, Circular No. 42-17, dated 28th October 1893 (*vide* Appendix VIII, page 126), communicates rules and forms of tables for the preparation of Annual Reports of the Civil Veterinary Department.

SECTION II.—REVENUE.

Imperial Bacteriological Laboratory.

SECTION II.—REVENUE.

Imperial Bacteriological Laboratory.

Alfred Lingard, M. B., M S., D. Ph., &c., &c., Imperial Bacteriologist. Officers
Mr. Kelway Bamber, M. R. A. C., Clinical Assistant.

2. The enormous losses which are occasioned by the contagious disorders of cattle have for many years engaged the attention of the Government of India. It has been calculated that millions of cattle die from such disorders as rinderpest and anthrax during each decade, and the consequent poverty to which cultivators have been reduced, the loss of revenue, and the necessity for issuing loans for the purchase of plough cattle, have been so serious as to demand some attempt at providing a remedy.

3. The great advance which has been made in the protection of animals from disease by inoculation warrants the hope that in the near future it may be possible to find a "vaccine" or protective virus which will be effectual in many of these disorders. All European and some Eastern nations have established institutions devoted to the study of Bacteriology in the hope of advancing the science to such a degree as to render it a real practical benefit to the public. Seeing the great loss annually suffered in this country from contagious diseases amongst cattle, and taking into consideration the facilities which exist for investigation owing to the religious prejudices against the slaughter of cattle, and the suffering animals being allowed to live through the course of all diseases, it is obvious that an institution for the study of these maladies would have advantages not to be secured in any other country.

4. The Imperial Bacteriological Laboratory was started in Poona in 1890 under the Civil Veterinary Department, and the services of Dr. Lingard, a distinguished Bacteriologist, secured to prosecute enquiries there. Unfortunately the premises at Poona were unsuitable, the site chosen was a bad one, and after two years experience it was found that the climate did not allow of the finer operations of the science being carried out; and hence successful investigation is impossible there.

5. In these circumstances, the Imperial Bacteriologist was obliged to confine his researches to a disease of considerable importance known as "Surra." He has published the results of his investigations in part (Vol. 1, Horse Surra), a most valuable report, and is now engaged in passing the remainder, dealing with the disease in rats, &c., and the life history of the Trypanosoma, through the press.

6. It has been decided that the laboratory is to be moved to a more suitable site in the Kumaon hills, where the conditions are more favorable for bacteriological research; the new laboratory there is in course of construction, and will, it is hoped, be completed shortly.

7. So soon as the change is made, I most earnestly urge that experiments be instituted with a view to preventing the most widespread and fatal malady which occurs in cattle in India *viz.*, rinderpest.

If a protective virus can be obtained for this disease, the Government of India will confer a benefit not only on this country, but on the whole world.

SECTION II.—REVENUE.

Babugarh Instruction Farm.

SECTION II.—REVENUE.

Babugarh Instruction Farm.

1. The following note by the Inspector-General, Civil Veterinary Department, shows clearly the objects with which the Instruction Farm has been started.

The Instruction Farm at Babugarh has been established under the orders of the Government of India* with the view of affording practical instruction in the following subjects:—

*Revenue and Agricultural Department letter No. 1842-26, dated 11th August 1892

(*a*) The management of horse stock in the stables, and the due care and farm working of stud horses and mares kept for breeding purposes.

(*b*) The cultivation of forage crops of kinds suitable and easily obtainable at a moderate cost for the feeding of horse stock.

It has been, and is still in India, the custom to use only horned cattle for agricultural and ordinary cart purposes, and so the demand for horses for draught work has been but limited, except for hackney carriages in towns, and for dâk carriage and *ekka* purposes where railways are not available. Hence the breeding of horse stock has been chiefly confined to meet demands for horses required for army purposes and Native States.

To allow of horse-breeding in any country proving remunerative, there must be one of two factors in operation, either—

(*a*) that pasture lands of a good class are available at little or no rent, and so brood mares and young stock can be bred and reared at a very trifling cost; or

(*b*) that brood mares are employed in agricultural work, by which the cost of the keep is fully defrayed by the results of their working, and thus the stock produced from them yield by their sale a profit.

As pasture land suitable for horse-breeding is only obtainable in most districts to a very limited extent—moreover, as the so-called pasture lands are as a rule not duly cultivated, and the grasses found on them are often of an inferior kind—it cannot be expected that horse-breeding can be followed under the conditions noted at (*a*).

Therefore, to allow of horse-breeding being made remunerative, it is essential that brood mares be employed at agricultural or cart work, and this slow work is suitable for mares kept for breeding purposes. Indeed, mares thus employed prove more sure breeders and produce better stock than mares simply kept for brood and given no work.

In this country horses are used for such draught work as bullocks cannot perform in sufficiently quick time, and it is well known that they can satisfactorily do fast work under the tropical sun of India. It may therefore be expected that they will prove no less efficient in the performance of the slower work of carting and of the farm.

Granted that the bullock is good for agricultural purposes, still it must be remembered that he yields no produce. It is not intended to urge the *general* substitution of horse and mare power in lieu of bullock power; but it is desirable to explain that in districts where horses are found to thrive and do well, the employment of mares and stallions for farm and cart work, and at the same time for breeding purposes, will be found profitable.

As practical evidence that horse-breeding conducted on the lines indicated is profitable, it may be mentioned that at the Civil Veterinary Department Depôt Farm at Babugarh horse and mare power only are used for all agricultural work, such as ploughing, harrowing, water-lifting, and carting. No bullock is employed, and it is found that stallions and mares perform the work as well as, and at a quicker rate than, bullocks. The mares having regular, steady and slow work yield good produce.

The instruction afforded, as above indicated, will convince agriculturists that horse stock can be used for all work now done by bullocks, and that by employing horse and mare power additional profit results.

The native farmer rightly, conservative as he is in not adopting new lines unless they prove paying, will, by witnessing the farm cultivation of the Babugarh Depôt, become assured that he can safely and profitably use horses and mares in lieu of bullocks for cultivating his farm and for carting produce to and from markets.

Hence it is desirable to allow native chiefs, zamindars, and others to have the opportunity of seeing every kind of farm work performed by horse, mare, mule, and donkey power, and so induce them to employ such labour instead of bullocks.

It may be hoped that in course of time horse stock will become generally used for the farm purposes for which bullocks are now exclusively employed; that thus horse, pony, and mule-breeding will spread and the supply of horse stock will increase, and the necessity at present existing of importing for State purposes thousands of horses annually at a great cost

will no longer remain, but the lakhs of rupees now sent out of India to foreign countries for imported horse stock will be distributed amongst the horse, pony, and mule breeders of India.

In several countries of Europe both bullocks and horse power are used in agricultural and cart work; but gradually mare power is becoming more generally employed for reasons above explained. In Hungary four horses and mares may be often seen treading out the corn in the same way that bullocks do in India.

At first sight it may be thought that the natives of India will never give up using bullocks for farm and carting work; but it is well known that a native will, when convinced of a new line of action in any trade being profitable, accept and adopt it.

The Instruction Farm is being worked with the view of showing and proving to native farmers and horse employers that by using mare power profit assuredly results. When a native sees that a horse mare or pony mare can do farm work as well as a bullock, and he likewise notes that the mares are either in foal or have foals at foot, and that the produce is saleable at good market prices, he will admit that the practice is sound.

It is therefore urged that every inducement should be offered to allow of the satisfactory results of cultivating and carting by horse and mare power at the Civil Veterinary Department Babugarh Depôt Farm becoming generally known and spread throughout the horse-breeding districts of India. In other districts, where the indigenous horse and donkey does not exist, being without the horse-breeding zone—indeed, having a climate unsuitable for horse stock—bullock power is generally available, and of course should be employed in lieu, as horses will not work satisfactorily in the climate and on the soil of lands of such districts.

It is therefore advisable to introduce horse and mare farm working in those districts only where horses are found to be easily and satisfactorily bred and reared.

A most important subject in connection with horse-breeding is the liberal feeding with proper kinds of forage and grains of the young stock, so as to give them every chance of growing into strong and useful animals. Horses, like other stock, are found stunted or well grown according to the manner in which they are fed and reared; hence we find the ordinary country "tatoo" the result of being reared on scant and very often innutritious grass lands; and, on the other hand, the large and well developed Punjab horse, which has for generations been from infancy well fed in order to be developed and made fit for war purposes. The food given to bullocks during dry months will as a rule do for horses. An agricultural bullock duly fed on dry *churri*, cut up in short pieces, and mixed with the usual amount of soaked grain, also bhusa, is found to keep in good condition. A horse or mare similarly fed will also do well. In Sind and other very dry climates, where green and dry grass cannot be obtained for horse stock, churri and bhusa, as above noted, are always given.

So the instruction afforded at the Depôt Farm in ploughing, ridging, harrowing, manuring, water-lifting, and the sowing and cultivating of forage crops and grains by horse and mare power in an easy and satisfactory manner, with the view of obtaining good and heavy forage crops, is the most important adjunct to horse-breeding.

The methods of grass and forage cultivation found most productive are practically carried out on the farm, and the crops obtained can be seen, weighed, and thus judged of.

Local Governments and Administrations are enjoined to be so good as to allow native chiefs, wards, farmers, and members of District Boards, also revenue officials, to have an opportunity of visiting the Babugarh Civil Veterinary Department Instruction Farm at the times when classes are held for the demonstration of the following subjects:—

I.—Stable management.

II.—Management of stud stallions, brood mares, and young stock, and the system of utilising them for agricultural purposes.

III.—Forage crop cultivation, *viz.*, lucerne, guinea grass, impey, dub, carrots, oats, barley, &c., &c.

IV.—Irrigation by horse, mare, mule, and donkey power.

It has been arranged that these classes will be held from 8th to 16th August and from 24th December to 1st January every year, when practical instruction will be given by the Civil Veterinary Department officers on the above subjects.

The lectures on stable management and the management of stud stallions, brood mares, and stock will be delivered in the stables and paddocks, and practical instruction in the forage crop cultivation will be given in the fields on the farm.

2. Intimation by Revenue and Agricultural Department Circular letter No. 42—26, dated 15th November 1892, was given to local Governments and Administrations.

3. For the purpose of illustrating the general principles on which the farm is worked and the results of the first year's work, the operations of the

North-Western Provinces portion of the land is briefly reviewed here. Information as to the balance sheets, &c, of the whole farm is given as appendices IX to XII (*vide* pages 131 to 138).

4. This being the first year of the farm's existence, it is scarcely fair to judge from it what the results will be in the future as regards the cost of the agricultural portion; for, as is always the case in such operations as this, a certain amount of capital must necessarily be sunk in order to enable profit to be made later on. In these circumstances it is gratifying to find that a balance on the credit side is shown in the balance sheet.

5. The establishment of the new Instruction Farm was sanctioned from the 1st August 1892, and the land, standing crops, sheds, implements, &c., belonging to the stallion depôt was transferred to the farm from that date. The total area taken over is 70 acres, of which 59½ acres are under cultivation and 10½ acres are occupied by buildings, or used as grazing land and paddocks for the farm animals. **N-W. P land.**

6. The sanctioned grant for the working of the farm was Rs. 5,950. Of this amount, Rs. 3,300 were sanctioned for pukka wells, sheds, harness, carts, &c., Rs. 1,410 for the permanent establishment, and Rs. 1,240 for recurring expenses (*vide* Appendix XIII, page 139). The corresponding statement for the Punjab Instruction Farm will be found as Appendix XIV, page 140.

7. No provision was, however, made for the feed and keep of the animals, and this had therefore to be met from the savings under other heads, as the farm had not a large enough acreage to allow of sufficient grain crops being grown to fully meet the requirements of its animals.

8. The sinking of the three pukka wells at a cost of Rs. 1,800 was not carried out, as the land taken over from the stallion depôt already had four such wells, and it was not considered necessary to sink any more. Two or three wells will, however, be necessary when the additional land (250 acres) is sanctioned and taken over.

The animals belonging to the farm are as shown below:— **Animals.**

(*a*) Farm stallions	11
(*b*) Horse mares	10
(*c*) Pony mares	8
(*d*) Donkey mares	7
(*e*) Donkey colts	4
(*f*) Donkey fillies	1
(*g*) Mules	1

9. The number of stallions varied from time to time owing to purchase and sales to district boards, court of wards, &c; but there were never more than six present at any time of the year. With the exception of one purchased from Lieutenant Battine of Muttra, the stallions were received from Bombay. Of the 11 purchased, six were sold during the year (*vide* Appendix XV, page 141). The corresponding statement of the Punjab Farm stallions will be found in Appendix XVI, page 142. **Stallions.**

10. The ten horse mares were received by transfer (without payment) from the Kurnal and Hapur Remount Depôts on the 11th and 22nd November respectively. All these mares, with one exception, are good workers, and have been regularly worked since their arrival. They have all been served, and nine appear to be in foal. Of the eight pony mares, six were purchased at the Jellalabad fair and two taken over from the stallion depôt. They have all been served by donkeys, and seem to be in foal. **Horse mares.**

11. Seven donkey mares and foals, &c., were taken over from the stallion depôt. The mares have been served, and six out of seven appear to be in foal. **Donkey mares.**

12. The crops grown on the farm were— **Crops.**

(1) Lucerne.	(7) Bedding grass.
(2) Guinea grass.	(8) Oats.
(3) Impey	(9) Linseed.
(4) Carrots.	(10) Barley.
(5) Dub grass.	(11) Gram.
(6) Hay.	(12) Clover.

Lucerne. 13. There are nearly four acres of land under lucerne cultivation, about two-thirds of which are under crops of from two to six years standing, and the remaining one-third was sown in October last with seed imported from Quetta and Saharanpur. The old crops have given a good outturn, but those from seed received from Quetta and Saharanpur were unsatisfactory. The seeds germinated very well, but after growing for a couple of inches the plants became stunted until about the beginning of March, when they shot up. The total outturn was 1,038 maunds 22 seers, of which the majority was given to the Imperial stallions.

Guinea grass. 14. The area under guinea grass is about 1¾ acres. The whole was planted last year. This was a very satisfactory crop, yielding 1,486 maunds 9 seers. During the hot months, when lucerne does not thrive well, it grows luxuriantly with very little irrigation. In the winter, however, it becomes stunted, not standing the cold well.

Impey. 15. The impey was sown at the end of February 1892, and yielded two cuttings before the land was transferred to the farm. A third crop was taken from it during August, and the fourth was allowed to run to seed, of which 123 pounds were saved. The yield of green impey was 410 maunds 14 seers, and it was supplied to the Imperial stallions.

Dub. 16. When the land was taken over from the stallion depot, there were about 13 acres under dub grass cultivation, and in August 9 acres more were brought under. The total outturn of green dub was 4,950 maunds.

The yield is very satisfactory considering that much of the grass was newly sown.

Carrots. 17. The carrots were unsatisfactory. This was due to the fact that imported seed was used. The area under cultivation was three-fourths of an acre, and the yield only 24 maunds of carrots and 5 lbs. of seed.

Oats. 18. Twelve and a half acres of land were under oats. The yield was good—460½ maunds of green oats, 287 maunds of seed, and 605 maunds of straw.

Hay. 19. Five hundred and twenty maunds of hay of excellent quality were made.

Linseed. 20. The linseed crop was injured by blight owing to excessive rain. Five maunds of linseed were obtained from one bigha of land.

Barley. 21. The barley crop was very successful, the yield from 2 acres being 62 maunds. The ordinary yield is about 5 maunds per kutcha bigha, whereas our yield was seven.

Gram. 22. Seven and a quarter acres were sown with gram. Two varieties were sown—the white or Cabul, and the brown or country. The yield was not good owing to the heavy rain which fell whilst it was in flower.

Clover. 23. About a quarter of an acre was sown with white and red clover. The seeds germinated fairly well, but the plants would not grow beyond a couple of inches until March, when they flowered freely and produced a good crop of seed. The red clover, though producing a more luxuriant crop than the white, is rather delicate and not likely to thrive well in the plains. The white is hardier, but it grows short, and the yield is small. The acclimatized seed will be sown this year.

Result of operations. 24. The farm during the portion of the year which it has been worked has proved a success, showing a profit balance of Rs. 2,096-9-7. The expenses resulting from purchase of plant, &c., not being likely to recur, the savings ought to be greater next year.

Instruction. 25. Two classes were held at the farm during the year—one in the winter, and the other in the summer. The regular course of instruction was gone through, a programme of which is to be found in Appendices XVII to XX, pages 143 to 147, where the names of those attending the classes are also given.

J. H. B. HALLEN,

Veterinary Lieutenant-Colonel,

Inspector-General, Civil Veterinary Department.

The 31st December 1893.

SECTION I.—MILITARY.

APPENDICES.

SECTION I (MILITARY)—APPENDIX I.

Referred to in paragraph 6, page 3.

No. 31-C., dated Meerut, 22nd August 1892.

From—Inspecting Veterinary Surgeon J. H. B. Hallen, Inspector-General, Civil Veterinary Department,

To—The Secretary to the Government of India, Military Department.

I have the honor to submit this report regarding my visit to Hungary for the purpose of purchasing a few stallions for the Government of India. The attached copy of a letter from the India Office, No. M-6093, dated 5th July 1892, contains the orders given me on the subject.

2. I received on the evening of the 7th July 1892 from the Foreign Office, London, letters to the Embassy at Vienna and the Consul for England at Buda Pesth explaining the purport of my mission, and on the following morning, 8th July, I left London and arrived by the Orient express train from Paris to Vienna on the evening of the 9th idem (Saturday). On Monday, the 11th, I visited the Embassy, also had an interview with Colonel Douglas Dawson (Coldstream Guards), Military Attaché at Vienna, and found that I had to proceed to Buda Pesth in order to see the Hungarian studs.

3. I accordingly left Vienna the same afternoon, and arrived at Buda Pesth that night; not being quite well the following morning, I, by the advice of a medical practitioner recommended by the Consul, was confined to the house for two days. During that time the Consul (Mr. Brüll) kindly visited me, and on my recovering from indisposition I accompanied him to the Government Secretariat, and interviewed the Officiating Director of the Horse-Breeding Department, to whom I explained my mission, and that I would like to inspect the stallions for disposal in order that I might select those suitable for Indian stud purposes at an average price of 2,000 florins each.

The Director then explained that it is true stallions have been sold from the studs at so low figures as 1,000 to 2,000 florins each; but these have been selections by the stud officials, and if I was to be allowed the selection of only those I considered suitable, the prices would vary from 3,000 to 4,000 florins each.

4. I may here mention that the Councillor de Kozma, in charge of the Horse-Breeding Department, had died a few days before my arrival, and the officer in temporary charge of the office was not aware of the Austro-Hungarian Consul at Bombay (Herr Stockinger) having been informed by letter from Councillor de Kozma that the Indian Government were to have as a special case stallions at 2,000 florins each. Since my return to Bombay I have interviewed Herr Stockinger, and on my explaining to him the reason why I had not been able to purchase stallions, he expressed his regret that Herr Kozma's decision as to prices had not been known to the Officiating Director; and the attached copy of letter from him to my address is explanatory as to cause of the mistake.

5. I, of course, informed the Officiating Director that I could not exceed my orders as to price; but that as I had come to Hungary and was desirous of seeing the stallions for disposal, I should be obliged by his allowing me to make a personal inspection of the horses, especially those of pure Arab breed and of half Arab blood; and as my time was limited by having to return to India within three months of my having left the country, that I might be allowed to visit the stud or studs in which the classes of stallions above noted might be found. The Director advised my going to the Babona Stud, and he was good enough to telegraph directions to the Stud authorities for my reception and inspection of stock. On the 17th July, accompanied by Mr. Brüll, the Consul, I arrived at Babona; the officer in charge of the stud gave us a cordial reception, and we had the opportunity of seeing every head of stock in the stud; and from notes taken I beg to record the following information.

6. The Babona Stud is about five hours' journey by rail and road from Buda Pesth, and consists of lands of 4,000 acres with light sandy soil; the

country is undulating, affording good drainage. Some of the fields are at an altitude allowing of a view of the neighbouring country for 15 to 16 miles around. I observe in the report on Horse-Breeding in Hungary by Colonel Douglas Dawson that 10,000 acres is noted as the size of the farm, so I conclude that it has recently been reduced to 4,000 acres, which number was given me last month. This stud has been found very suitable for breeding Arab stock on account of the nature of the soil, and is doubtless a most valuable property. The stud has been in existence a hundred and three years. Originally, Hungarian, Transylvanian, and Bessarabian mares were employed. Since 1816 importations from Arabia of the highest caste of stallions and mares obtainable have from time to time been effected. During the last 25 years the greatest care has been exercised in the selection of the parent stock. Thus the pedigree of the stock raised in this stud clearly proves that the brood mares and stallions can be relied on for stud purposes.

7. The farming operations are cared for by scientific agriculturists, and judging by the crops of clover of several kinds, hay, &c., &c., and the cultivation generally, the farming is right well done. It was a great pleasure to see the young stock grazing on excellent grasses and clover, and to find that change of pasture is ensured by the area of land (4,000 acres) being liberal compared to the sanctioned number of stock, *viz.*, 600 on the farm, which strength is not exceeded.

8. The numbers of different classes of stock on the farm on the date of my inspection were as follows :—

Brood mares.	In foal and with foals at foot (sanctioned number) ...	150
Fillies .	Yearlings	40
	Two-year olds	50
	Three-year olds	44
Colts .	Yearlings	41
	Two-year olds	52
	Three-year olds (entires)	37
Stallions at stud all thorough-bred Arab, or pure bred half Arab ...		7
	TOTAL ...	421

9. The mares may be truly described as generally good; many remarkably excellent. They consist of pure bred and half-bred Arab; the latter a greater number than the former. Among the pure bred mares are several of stamp and quality not to be surpassed. One light grey—nearly white—mare "Mahmat" is of the best quality and of excellent shape: about 15 hands and half an inch in height, and good under knee. Many of the mares are grey, and the flea-bitten grey colour is the one much liked. They generally measure well in girth and under knee. Other pure bred mares of high caste and good bone: a few are small, but these smaller ones being roomy, yield large stock. Truly it is a grand sight to see so many excellent Arab—real Arab—mares.

10. The half-bred Arab mares possess great bone and power, and as a rule have deep barrels, good shoulders, and hind quarters, and in bone of leg are excellent. Several are equal to carrying heavy Dragoons; one, a chestnut, is quite a model as a weight carrier. All these mares are served by thorough-bred Arab or pure bred half Arab stallions. The number of foals to mares covered is said to be about 70 per cent. There are two breeding seasons—one so as to allow foals to be born in March and April; the other for foals to be dropped in November and December. Preference is given to the latter breeding season, as foals born in March and April are at times found subject to lung disease during the first six months of their lives.

11. The mares and foals are in excellent condition, and have full liberty except at grain feeding times. In order to test the working value and powers of endurance of mares, it is customary to send some every year to Vienna, where they are hunted for a season and then reported on. The young stock

are kept in lots according to age and sex, and have frequent change of pasturage. There are no fences around the fields. When the stock are grazing, mounted (Csikos) herdsmen are in charge to prevent their straying off their allotted portion of grazing. All this is done in a most methodical and quiet way. The stock are from their infancy well trained, and thus are as easily kept in order as sheep.

12. The forty yearling fillies are very promising. All in good condition and evidently doing well in every respect. The 50 two-year old and 44 three-year old fillies are of great bulk, proving that with liberty and liberal feeding, especially green diet, the pure bred and half-bred Arab will grow into large, well boned, and bulky stock.

13. The colts, 41 yearlings and 52 two-year olds, are likewise in the best of condition, and of large size in bone of limb. Colts not considered likely to prove fit for stud purposes are castrated early in life, generally when about 12 or 13 months of age. The reason why early castration is adopted is that a case occurred of a 14-month old colt having been found desirous of covering mares.

14. The number of stallions at stud in this depôt for the serving of 150 brood mares, also for private mares outside the stud, is at present 7 (seven). They are a very good lot, and are proving good stock-getters. One of the best Arab stallions that belonged to this stud was "Yusuf." His stock is excellent, and it was only last year that on account of age he was disposed of and sent to Roumania. The most castey stallion at present here is "O. Bajan" (Obeyan), a dark brown nearly black *Asil* to look at, but rather light in joints and bone; still many of his stock are good in these particulars, and this result is doubtless secured by mating him with large boned mares. This horse was imported from Arabia. I was informed that several Arabs have proved indifferent stock-getters, and have been discarded: moreover, that some of the very best looking Arabs have not proved the best stock-getters; but it has been found that a really good Arab—a true *Asil* Arab—is the most impressible stock-getter as regards general appearance, shape, and disposition of produce.

15. The 37 three-year old entire colts are, of course, stabled and have regular exercise, being ridden morning and evening by the soldiers attached to the depôt. Several of them are quite suited for Indian Government stud work, possessing, as they do, well boned limbs and good girths and barrels, more especially the half-bred ones, owning pedigrees of half-bred Arab blood for several generations, thus rendering them pure half-breds. In the event of any purchases being desired by the Indian Government, it will be advisable to exercise care in the examination of the hocks of the stock.

16. The climate, soil, and water of the Babona Stud lands are evidently well suited for Arab horse-breeding, for the stock bred increases in height, bulk, and bone, and the quality of the animal does not seem to be affected. I was informed that the stock are generally very healthy and the mortality, at a low figure, that spavins and ring-bones are seldom met with, and only sound sires and dams are bred from.

17. Many points with regard to interior economy of the stud and the strength of the establishment which were brought to my notice have been recorded in the interesting report on horse-breeding in Hungary by Colonel Douglas Dawson, and therefore I need not reiterate them.

18. As I had to return to India within three months of the date of my departure from Bombay, having taken a three months' return ticket by the Peninsular and Oriental Company's steamer, I had not time to visit the studs of Fogaras, Mezzohegyes, and Kisber; but from what I have gathered this month in conversation with Herr Stockinger, who possesses full knowledge regarding the Government Studs of Hungary, there can be no doubt that suitable stallions for India may be also found in Fogaras and Mezzohegyes. Therefore should the Government of India decide to send next year an officer to purchase, he should be instructed to visit all the studs, and to select in his opinion the best stallions found in each of the class and to the number required. To perform this duty properly, two or three months should be allowed in

Hungary, so that the purchasing officer may not have reason to hurry over his work. The difficulty experienced during recent years in obtaining really high class Arab stallions in the Bombay market induces me to recommend that the opportunity afforded of securing some from Hungary should not be overlooked.

19. I owe Mr. Brüll, the British Consul at Buda Pesth, a debt of gratitude for having so kindly and heartily co-operated with me in my interview with the officiating head of the Hungarian Horse-breeding Department, and for having accompanied me to and from Babona, and most kindly acted as interpreter and made my interview pleasant and satisfactory with the Hungarian officials. I also wish to record my sincere thanks to the Commandant of the Babona Stud for the very hearty manner in which he personally showed every head of stock, and was always genially ready to reply to all my questions and afford all information in his power.

20. A detailed account of the £60 advanced to me by the India Office, together with the two (first and seconds) unused forms of bill on the Right Hon'ble the Secretary of State for India, are submitted under cover of a separate communication.

Dated 13th August 1892.

Demi-official from—Herr F. STOCKINGER, Consul-General for Austro-Hungary,

To—J. H. B. HALLEN, Esq., Inspector-General, Civil Veterinary Department.

It was a great disappointment for me, and I have no doubt it will be for the Hungarian Government, to hear from you yesterday that through an unfortunate combination of circumstances (the absence of the Minister Count Bethlen and the sudden death of poor Councillor de Kozma) you have been unable to make your intended purchase of stallions from the studs of the Hungarian Government.

I take it that it is the fault of the respective department in Hungary that the decision of the Minister to sell a number of stallions to the Government of India at 2,000 florins each should not have been known to the persons you met at Buda Pesth, and I shall see that a communication on the subject should be addressed to you from Buda Pesth.

A letter addressed to me on the subject by the late M. de Kozma is in my hands now.

In the meanwhile, I sincerely hope that your Government will not finally abandon the idea, and should I be, as I hope, in Europe at the time of your next excursion to Hungary, I shall be very happy to do my best in order to make your stay there a successful and agreeable one.

Dated Byculla Club, Bombay, 13th August 1892.

Demi-official from—J. H. B. HALLEN, Esq., Inspector-General, Civil Veterinary Department,

To—Herr F. STOCKINGER, Consul-General for Austro-Hungary.

My best thanks for your letter of this date, which I will submit with my report to the Government of India.

It will, indeed, be a great pleasure to me to accompany you to the Hungarian Studs should I be again deputed to visit them.

No. M.-6093, dated India Office, London, 5th July 1892.

From—SIR HORACE WALPOLE, Under-Secretary of State for India,

To—The Inspector-General, Civil Veterinary Department, care of Messrs. Henry S. King & Co., 45, Pall Mall, S. W.

No. 80 of 1892 with enclosure.

In continuation of this office letter No. M.-5147 of 9th June 1892. I am directed by the Secretary of State for India in Council to forward, for your

information, copy of a despatch from the Government of India recommending that, on your way back to India from your present short leave, you should be permitted to visit some of the Hungarian Studs with a view to purchasing a few stallions for the Government of India if they appear suitable.

This you are authorised to do, and the Foreign Office has been requested to afford you the necessary facilities.

While on this duty you will be allowed your travelling expenses with subsistence allowance at £1-1 a day from the date of leaving London to that of embarking for India.

An advance of £60 will be issued to you by the Accountant-General of this office to be accounted for by you to the authorities in India on your return to that country.

The average price paid by you for such stallions as you may purchase should not exceed 2,000 florins.

For any sums so expended you may draw bills on the Secretary of State (2 firsts and seconds.) for India in Council, forms of which are herewith enclosed.

I am to request that you will report any arrangements you may make for the shipment of these stallions, which should not reach India before the cold weather. Possibly the Hungarian authorities will be able and willing to undertake their despatch from Trieste to Bombay, all expenses being adjusted by you in communication with the Consul-General at Bombay.

No. 80, dated Simla, the 7th June 1892.

From—The Government of India,

To—The Secretary of State for India.

In continuation of our telegram of 27th May last, we have the honor to forward a copy of the correspondence detailed in the accompanying list regarding the proposed purchase of stallions for horse-breeding purposes from the Hungarian Government.

2. As we believe there may be some difficulty in obtaining in England the whole of our requirements in stallions during the current year (*vide* our Military despatch No. 74, dated 31st May last), we have thought it advisable, subject to your Lordship's approval, that Mr. J. H. B. Hallen, Inspector-General, Civil Veterinary Department in India, who is now *en route* to England on short leave, should be permitted on his return journey to visit some of the Hungarian Studs with a view to inspecting and, if he thinks fit, purchasing some of their stallions if they appear suitable and comparatively cheap. If, as we trust, your Lordship approves of our action in this matter, we would ask that Mr. Hallen may be instructed accordingly and afforded every assistance in carrying out this duty, both as regards introduction to the Hungarian authorities concerned, and the provision of necessary funds for travelling expenses and possible purchases.

No. 145-15, dated Calcutta, the 30th January 1892.

Memo. from—J. W. P. Muir-Mackenzie, Esq., Under-Secretary to the Government of India, Revenue and Agricultural Department,

To—The Secretary to the Government of India, Military Department.

The undersigned is directed to forward, for information and record, a copy of the marginally noted correspondence relative to the supply of Hungarian horse stallions.

Demi-official No. 2375, dated 28th October 1891, to Herr F. Stockinger, Austro-Hungarian Consul-General at Bombay.
Letter, dated 25th November 1891, from Herr F Stockinger
Demi-official No. 93, dated 19th January 1892, to Herr F. Stockinger.
And connected notes.

No. 2275, dated Simla, the 28th October 1891.

From—J. W. P Muir-Mackenzie, Esq., Officiating Secretary to the Government of India, Revenue and Agricultural Department,

To—Herr F. Stockinger, care of Austro-Hungarian Consul-General at Bombay.

Sir Edward Buck has left it on record that you had stated in conversation with himself and Colonel Deane that the Austrian Government were disposed to present the Government of India with the munificent gift of five or six stallions of the class used in Hungary to produce army horses. I am now permitted to inform you that, should the Government of Austria be willing to carry their generous intentions into effect, the Government of India will have much satisfaction in receiving the stallions, and making suitable arrangements to secure their produce for remount purposes. If the stallions are to be of use during the coming year, it is advisable that they should start early, as it is found that imported horses invariably require a period of acclimatisation before they are able to withstand effectually the strain of the hot weather. Should it not be convenient to despatch the stallions at an early date, therefore, it may be desirable to postpone operations for another year. I am to suggest that you will be so good as to place yourself in direct communication with Mr. Hallen, the General Superintendent, Horse-Breeding Operations, Meerut, regarding the despatch and reception of the stallions.

In conclusion, I have much pleasure in conveying the cordial acknowledgments of the Governor-General in Council both to the Austrian Government for their kind intentions and to yourself for the interest which you have displayed in questions affecting horse-breeding operations in India.

Dated Gorz, Austria, 25th November 1891.

From—Herr F. Stockinger,

To—The Secretary to the Government of India, Revenue and Agricultural Department.

Your letter, dated the 28th October 1891, No. $\frac{2275}{48}$, has reached me here just now. I sincerely regret that the conversation which I had the pleasure to have with Sir Edward Buck and Colonel Deane some months ago at Simla should have led to a misunderstanding which I can only suppose is owing to my not having expressed myself with sufficient clearness on that occasion.

The Royal Hungarian Government did not intend to make a gift of a certain number of stallions from her own studs to the Indian Government, but on my representing the mutual benefit that may arise from introducing that excellent breed of horses into the studs of the Indian Government is ready to sell at a uniform price of 2,000 florins Austrian value to your Government such horses.

What may have led to this misunderstanding is perhaps that I mentioned this as an exception made by the Hungarian Government in favour of yours.

The Hungarian Government does not sell stallions from their studs (except English thorough-breds for racing purposes), as they and more are required for breeding purposes by being let out to private breeders, farmers, &c. Only once before have three Arab stallions been sold to the Emperor of Japan.

A detailed account of this I have already given to Mr. Hallen at Simla, who has also made written notes in my presence on all particulars, mode, and cost of transport, &c. Mr. Hallen intended at that time to address the Military Department on the subject, which has perhaps been done since. Besides, if I am not mistaken, I have written on the subject in your absence to Mr. Young in the course of last summer.

I regret not having found you at Simla when I called at your office.

Finally, I can only express my hope that His Excellency the Governor-General in Council and yourself exculpate me of any intention of misleading him and you in this case.

No. 93, dated Calcutta, the 19th January 1892.

From—The Under-Secretary to the Government of India, Revenue and Agricultural Department,

To—HERR F. STOCKINGER, Gorz, Austria.

I am desired to acknowledge the receipt of your letter dated 25th November last, and to express regret that there should have been any misunderstanding in regard to the Hungarian stallions. The position is now quite clear. I am to thank you for your explanation, and to repeat the acknowledgments of the Government of India of the trouble you have taken on their behalf in this matter.

Dated Meerut, the 14th May 1892.

Demi-official from—INSPECTING VETERINARY SURGEON J. H. B. HALLEN, Inspector-General, Civil Veterinary Department,

To—The Assistant Secretary to the Government of India, Military Department.

Will you kindly place before General Brackenbury the file regarding the offer of the Austro-Hungarian Government, through Herr Stockinger, of six stallions at Rs. 2,000 each, and should the Hon'ble Member deem it advisable for me to visit Hungary as I return from England for the purpose of inspecting the Austro-Hungarian Studs with the view of submitting a report for the information of the Government of India on the several classes of stallions as to the suitability of any class or classes for Indian stud work, I shall have pleasure in visiting the studs?

Herr Stockinger, the Austro-Hungarian Consul in Bombay, has kindly sent me a letter of introduction to Count Bethlen, the Hungarian Minister of Agriculture, who, he says, will give me every facility in inspecting the studs, adding "I am sure His Excellency will be delighted to make your stay in his establishments as agreeable as possible."

Should General Brackenbury deem it advisable for me to go there, I would add that perhaps it would be as well for Major-General Ravenhill to accompany me, so that the Viceroy in Council would be thus enabled to have our conjoint report.

Our deputation would, I fancy, have to be sanctioned by the Secretary of State for India.

Dated India Office, London, 7th July 1892.

From—INSPECTING VETERINARY SURGEON J. H. B. HALLEN, Inspector-General, Civil Veterinary Department, care of Messrs. Henry S. King & Co., 45, Pall Mall, S. W.

To—The Under-Secretary of State for India.

I have the honor to acknowledge receipt of your letter No. 6093, dated 5th July 1892, and to state that the orders contained therein will be duly acted up to by me.

I intend leaving London to-morrow morning, and expect to reach Vienna on the 10th, and on 11th will call at the Embassy to obtain the necessary assistance in order to allow of my visting the Hungarian Studs.

Dated 24th July 1892.

From—INSPECTING VETERINARY SURGEON J. H. B. HALLEN, Inspector-General, Civil Veterinary Department, care of Messrs. Henry S. King & Co., 45, Pall Mall, S. W:

To—The Under-Secretary of State for India,

I found at an interview with the Director of Horse-Breeding Department of the Government of Hungary at Buda Pesth that any stallion selected by me

from those for disposal would be priced "from 3,000 to 4,000 florins," but that any selected by the Hungarian Stud officials are available from 1,000 to 2,000 florins.

Under these circumstances of course, and my instructions not to give more than 2,000 per stallion, I could not purchase superior Arab or half-bred Arab stallions, and the smaller and lower priced ones would not be worth buying, as others equally good can be obtained at the same prices in the Bombay market. But as I was on the spot I asked permission to inspect at the Babona Stud (some five hours by rail and road from Buda Pesth) stallions for sale, also mares and produce, and there I was most courteously received and saw all the stock farming, &c., and I will after arrival in India submit a report to Government of India on my proceedings and suggestions for any future action that may be deemed necessary. I have arrived here in time to leave by this steamer *Sutlej*, so I expect to reach Bombay about 7th proximo.

Report on Horse-Breeding in Hungary by Major Douglas Dawson, Coldstream Guards.

To facilitate the industry of horse-breeding and to improve their breed of horses, the Government maintains a number of studs and stallion depôts. These establishments are under the control of the Ministry of Agriculture, but have a military organisation.

The *personnel* forms an integral part of the standing army under the collective title of the "Stud Branch," and is divided into a military inspectorate and a number of military divisions.

A military division of the Stud Branch is attached to each of the studs and stallion depôts, and the Commander of the division is at the same time Commandant of the breeding establishment.

The military inspectorate also, with a general officer at its head, forms the channel of communication between the military divisions and the Ministries of Agriculture and War, and the inspector is charged with the duties of general inspection and superintendence from a military point of view.

The *personnel* consists of—

1 General officer as inspector,
9 Field officers as commandants,
18 Captains,
40 Lieutenants,
2 Chaplains,
10 Military surgeons,
42 Farriers,
61 Technical employés.
6,511 Non-commissioned officers and men.

The total *personnel* of the studs and depôts is 3,736.

The four studs are located at Kisber, Babona, Mezzöhegyes, and Fogaras, and the five stallion depôts at Stuhlweissenberg, Nagy-Koros, Debreczin, Sepsi-Syt-Gyorgy, and Warasdin.

Each of the stallion depôts has a district assigned to it, over which during the covering season the stallions are sent to the various stations, according to a pre-arranged published programme, under charge of a detachment belonging to the depôt, and returns to it again at the close of the season.

The direction of all matters pertaining to horse-breeding, administrations of the studs, depôts, and other such State institutions are under the department of horse-breeding of the Ministry of Agriculture. Every stud farm has, besides its military head-quarters, a "farm direction," which consists of civilian employés. The administration of the large estates of the Stud establishments, comprising nearly 75,500 acres, is in charge of the farm direction.

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1. Kisber.

This stud is in the district or country of Komarom, on a farm of 15,825 acres, and has on it 611 horses and mares. Here only thorough-bred and half-bred English horses are raised. The number of thorough-bred stallions at this

moment there is 13, and thorough-bred mares 28. I was not very much struck with the looks and condition of the stallions.

Among the celebrated stallions of Kisber, past and present, may be mentioned Buccaneer (sire of Kisber), Cambuscan (sire of Kincsem), Ostrager, Bois Roussel, Doncaster, Craig Millar, Galaor, Gunnersbury, and Sweet-bread. The five last-named are there now. Galaor was purchased in France last year, and I hear nothing but disapproval of the purchase in sporting circles. I cannot say I liked the horse myself.

The price of service of Doncaster and Craig Millar is £40.

The stallions of Kisber are in such constant demand by native breeders that but few applications from abroad can be entertained.

The present and past list of mares of this farm includes the names of Mineral, Beeswing, Gratitude, Deception, Firefly, Honeybee, Empress, Altona, Cataclism, Leclaire, Gaydene, Risk, &c.

The thorough-breds raised here are sold at auctions as yearlings to native breeders or owners of race-horses. Buyers are under obligation to keep all thorough-breds purchased in the country at the conclusion of their racing career.

From 16 to 18 yearlings are sold every year at an average of about £240, but in some cases prices have reached £1,200.

The Government buys back many thorough-bred stallions bred at Kisber when they have done racing, using them for breeding purposes in the farms and depôts.

The half-bred stock of Kisber numbers 100 mares, most of whom have a strain of thorough-bred English blood for one or more generations. These produce fine harness horses, and they say turn out first-class hunters for officers, although for riding I have found most of these horses deficient in shoulder.

The stallions bred at this farm are placed at the disposal of the breeders of five counties.

The half-bred here averages from 16 hands to 16 hands 3 inches in height.

During the past 10 years more than 221 thorough-bred yearlings have been sold from Kisber, and 264 thorough-bred stallions have been employed at the depôts during the covering season.

The following averages have been realised by sale of yearlings in recent years:—

						£
In 1888, 13 yearlings were sold at average of				...	...	292
„ 1889, 12	„	„	„	...	...	298
„ 1890, 17	„	„	„	...	...	330
„ 1891, 9	„	„	„	...	...	244

This stud farm of 10,000 acres, and possessing 450 horses, is also in the district of Komarom, at a short distance from Kisber, and is maintained for raising thorough-bred and half-bred Arabs. It was founded in 1789 with Oriental (*i.e.*, Hungarian), Transylvanian, and Bessarabian mares, and since its commencement the stallions have all been of Eastern origin. **2. Babona.**

From the year 1816 only thorough-bred and half-bred Arabs have been raised here, during which time more than 20 importations of fresh blood have been made.

Babona has now 26 thorough-bred and 100 half bred mares, for the service of which are kept the thorough-bred stallions O. Bajan and Gaylon, and the half-bred stallions Zarif and Shagya. It is most important in a country where most of the stock is of Eastern origin to keep up the pure Arab breed, and it is thought that the race is more surely improved by stallions of the same origin, especially in those districts with a sandy soil, scant pasturage, and great variation of temperature.

The limit in number of thorough-bred mares covered by thorough-bred stallions is 15, the others being covered by half-breds.

The object of this stud is to raise half-bred Arabs of medium height, varying between 15 and 16 hands. The stallions raised at Babona are mostly em-

ployed in the counties of Pesth, Csongrad, Bekes, Aradszabolcs, &c., and in the valleys and plains of Transylvania. In the last 10 years Babona has placed 312 stallions at the disposal of civilian breeders.

3. Mezzohegyes.

Mezzöhegyes is the largest stud farm in Hungary, comprising 40,000 acres with 2,190 horses. It was founded in 1785, and is the oldest of all the Royal Hungarian studs. In the other studs only horses of one race are bred; while here, on the contrary, for more than a century particular types have been formed by means of crossing, climatic conditions, food, and other considerations. These horses are described as Norman, English, or Arab merely to distinguish the type and origin.

The stud of Mezzöhegyes was originally formed from Transylvanian, Bessarabian, Polish, Mecklenburg, and other mares selected from the best animals found in the Austrian army which had gone through the Turkish campaign or the French campaign at the beginning of the century. In many cases mares captured in war were placed in this stud, where the blood was considered of less importance than powers of endurance shown on service. Thus mares of different breeds have been covered in the course of time by Arab, Spanish, Transylvanian, Moldavian, Hungarian, Mecklenburg, Holstein, and Norman stallions, and their selection is now, as formerly, less due to blood than to other considerations.

Although the horses on this farm have been bred for a number of different objects, the idea has been to work so as to favour a certain race or type.

In this manner four different types or cross-breds have been formed at Mezzöhegyes, *i.e.*—(1) the "Gidran" breed, with 100 brood mares; (2 and 3) the small and large "Nomus" breed, each with 100 mares; (4) the half-bred English, of which there are 80 mares.

The Gidran breed, called Anglo-Arab, are descended from a pure Arab stallion called Gidran brought to Babona in 1818. At first Arabs were exclusively used in this breed, but for the last 20 years it has been crossed with English thorough-breds. These horses average about 16½ hands high.

The two "Nomus" types are of French origin, and descend from a Norman stallion captured from the French in 1815.

The strongest mares in Mezzöhegyes have been crossed by this horse and his descendants, forming special type, have been latterly divided into two classes according to size, which are called large and small "Nomus." The former average 16¼ hands, and the latter 14½ to 15½ hands.

To correct faults, the result of in-and-in breeding, this race has been crossed during the last 20 years with English thorough-breds. As with the Gidrans, the size and bone of this breed has been preserved by the thorough-bred stallions of the race.

The breed of half-bred English (Furioso-North Star) horses of this stud are not as fine as those bred at Kisber, but are found better able to stand the extreme climate. This race is really of mixed origin, but since 1840 it has been improved by the descendants of Furioso-North Star, and now all the mares are covered by thorough-bred or half-bred English stallions for getting light harness or strong saddle horses.

The Nomus mares are 200 in number; the half-bred English 100.

4. Fogaras.

This stud is situated at the foot of the Carpathian Mountains in Transylvania. It was founded in 1874 for improving the breed in the mountain districts. It contains 9,000 acres.

The race from which this stud was founded is mostly of Neapolitan, Spanish, and Oriental origin. Here the principal of native breeding is practised exclusively.

The brood mares are 100 in number.

The average height of horses raised at Fogaras is just over 15 hands; they rarely exceed 15 hands 1½ inches.

In the four Royal studs there are altogether 754 brood mares. They are kept in separate stables according to race, and are provided with special pastures in herds of from 80 to 100. Mares with foal enjoy immunity from work and are only exercised; the barren mares are worked in harness and ridden.

Foals, after they are weaned, are also separated into herds according to sex and age in special stables and pastures. Their education begins at three years, great care and kindness being insisted on. At four years their education being completed, they are definitely distributed: the stallions being sent to the depôts, and the most promising mares being retained in the studs. Surplus horses are sold by auction at Buda Pesth yearly in September and October, and sometimes useful animals are here to be picked up cheap.

The number of four-year old stallions sent to the depôts averages 110 per annum, and about the same number are sold.

Stallion depots.

There are at present five Government stallion depôts, sub-divided into 22 sub-depôts, containing in all 2,626 stallions. Most of the stallions come from the Government studs, with the exception of from 30 to 40, which are purchased from special breeders and as an encouragement to private studs, as the Government raises a sufficient supply to satisfy the annual demands of the country.

In course of time, when the progress of horse-breeding in the country has attained a certain limit, and the number of well-bred private stallions is sufficient to meet the requirements of the public, the necessity for the Government studs and depôts will disappear. This period is, however, still remote, and the existing establishments are necessary; but it is probable that their numbers may be gradually diminished in proportion as the horse-breeding in the country progresses.

The maintenance of the Government establishments involves considerable expense, but still the cost of service for stallions is extremely low.

The stud farms are not only self-supporting, partly from their own revenues and those of the farms upon which they are located, but have a considerable surplus annually.

The stallion depôts, on the other hand, require a yearly grant of £20,000 in addition to their own revenue and the surplus revenue of the stud farms.

The price of service in the depôts is absurdly moderate, varying from 3*s.* 6*d.* to 8*s.* for half-breds, and in case of a thorough-bred or particular stallion from 12*s.* to 21*s.*

Private studs and societies can hire stallions for the season at from £16 to £48. The number of mares covered by the stallions thus hired out is limited to 40. Horse-breeders hire on the average from 60 to 100 stallions per year.

The majority of the 2,626 Government stallions are only available for the public for four months of the year, *i.e.*, March to July.

During the season 600 stations are formed in the country, each with from two to eight stallions. Stallions of from five to six years of age may cover four times a week, and aged horses seven times.

The number of mares covered annually is about 85,000.

The price of service (paid down) entitles the breeder to four supplementary services, if necessary.

It has been computed that on an average each Government stallion hired out covers from 30 to 35 mares annually.

1. Depot of Szek-es-fehe-war.

There are 914 stallions here distributed during the season at four sub-depôts. The stallions are classified as follows:—98 thorough-bred English, 382 half-bred English, 60 Norman, 7 thorough-bred Arab, 92 half-bred Arab, 27 Lippican, and 16 native Hungarian.

The area of this depôt extends from the western frontier of Hungary on both sides of the Danube to the river Ipoly, and includes 20 counties.

2. Depot of Nagy-Koros. There are 799 stallions in this depôt and its sub-depôts. They are classified as follows:—73 thorough-bred English, 325 half-bred English, 10 Norfolk, 33 Lippican, 33 thorough-bred Arab, 110 half-bred Arab, 131 Norman, and 95 native Hungarian.

The area of this depôt includes the basin of Pesth between the Theiss and the Danube, and the south-eastern portion of the great Plain of Lower Hungary, and comprises 14 counties.

3 Depot of Debreczin. This depôt and its four sub-depôts contains 618 stallions, which are thus classified:—65 thorough-bred English, 199 half-bred English, 6 Norfolk, 9 thorough-bred Arab, 114 half-bred Arab, 87 Norman, 74 Lippican, and 64 native Hungarian. This depôt extends over 21 counties in the north-east of Hungary.

4. Depot of Szepsy szent-Gyorgy. This depôt is in Transylvania, and contains 315 stallions distributed over three sub-depôts. They are classified as follows:—16 thorough-bred English, 75 half-bred English, 9 thorough-bred Arab, 60 half-bred Arab, 76 Lippican, 37 Norfolk and Norman.

This depôt is for the whole of Transylvania, in the deep valleys and hilly districts of which are bred riding horses rather light of bone and of medium height, while in the mountains one finds a smaller breed of great strength and endurance.

5 Depot of Warasdin. This depôt is not, properly speaking, a Hungarian establishment, as it extends over Croatia and Slavonia.

The total number of stallions in the depôts is thus classified:—252 thorough-bred English, 27 thorough-bred Arab, 1,001 half-bred English, 356 half-bred Arab, 413 Norman, 210 Lippican, 40 Norfolk and native Hungarians.

Between the years 1859 and 1878 the numbers of mares covered in Hungary by Government stallions amounted to 800,000, and these figures have increased enormously since that time. At present a very large proportion of the horses in Hungary are the descendants of well-bred Government stallions.

The qualities of the horses are, of course, chiefly attributed to their origin, but the localities of the various districts, climatic conditions, soil, vegetation, and differences in the treatment and employment of the horses have all had their share in the modification and preservation of the various types.

The Kingdom of Hungary, 125,039 square miles in extent, has 30 per cent. of its area covered with high mountains, 20 per cent. hills and fertile valleys, 15 per cent. fertile land intersected by hills and grass prairies, and the rest treeless plains. The great plains, though fertile, are subjected to prolonged periods of drought, which results in deficiency of pasture, and good crops cannot be depended on. These conditions are not favorable for horse-breeding, yet the natural predilection of the inhabitants for the horse and the poor communications of the country have together brought about the present satisfactory results. The railways of Hungary are comparatively few and the roads very bad, those on the great plains being almost impossible to keep in order owing to the absence of stone. It is therefore quite natural for the people to occupy themselves with horse-breeding, and their preference for the light draught and saddle horses of Oriental type is logical, as these animals enable them to cover the long sandy stretches in the dry season and to get through the mud in the rainy season.

According to the last census, Hungary had 2,158,000 horses, or 385 per square mile (Austrian), and 140 per 1,000 inhabitants. This average varies greatly in different districts: for example, in the county of Mormoras there are only 80 horses per square mile and 68 per 1,000 inhabitants, while in Torontal there are 1,228 horses per square mile and 354 per 1,000 inhabitants.

Public and private institutions for improvement of horse-breeding. *Superior Advisory Commission.*—One of the guiding principles followed by the Minister of Agriculture in the administration of the Government breeding establishments is not to act exclusively on the advice of his sub-

ordinates, but to follow as much as he can the opinions of the breeders themselves. To carry out this principle, the Ministry has organised a Superior Advisory Organ or Commission of 10 members, partly elected by the Society of Agriculture and the Jocky Club of Buda Pesth, and partly appointed by the Ministry. This Commission meets at least once a year, when the Chief of the division of Horse-Breeding in the Ministry reports upon the work accomplished and experiments made during the year, and sketches out a programme for the ensuing year for the consideration of the Commission. This central Commission may be convoked at any time during the year. In every country there is also a provincial Commission of horse-breeding elected to act as advisers in the breeding districts of their country. These Councils send their own Presidents, and represent the breeding interests of their respective communities.

The Presidents of the Commissions make recommendations every year as regards the employment of the Government stallions, distribution of prizes for encouragement of horse-breeding, &c. The Presidents and members of the Commissions meet in Congress every two years at Buda Pesth to discuss results. Through these Commissions the Ministry of Agriculture is kept in constant relations with the horse-breeders of the country.

Horse-racing—Prizes—Subsidies.

For the maintenance of the breeding establishments, organisation of races, bestowal of prizes, &c., the Hungarian Parliament grants an annual subsidy of £220,000. The total expenses of the breeding establishments, including their own revenue, amount to £160,000, the State thus contributing a sum of £60,000 annually in prizes, &c. Besides this subsidy, there is a special national fund available, used chiefly in aid of breeding thorough-bred stock. The administration of this fund is in the hands of a Civilian Commission, and the State only exercises a supervision over it. The fund amounts to about £40,000, and its revenues are used principally for purchasing thorough-breds in England or the Continent. These are sold at auction to the breeders of this country. Since the establishment of this fund five thorough-bred stallions and 100 thorough-bred mares have been purchased. These stallions and mares are kept in the stud farm of the fund at Kaposztai-Megyes near Buda Pesth.

The administrative council of this fund is also authorised to spend money on race meetings, prize giving, &c.; in fact, everything in horse-breeding interests. The fund itself cannot be touched except by authority of the Government and King.

Race-courses.

There are at present 10 race-courses in Hungary, 250 horses in training, and 30 training stables. The Government grants annually £400,000 in prizes; the Government grand prize being £400. In addition a considerable number of prizes and stakes are given by private societies and individuals.

Prizes.

For encouraging the small breeders, annual shows for prizes are held in forty-eight different places, for which purpose the Government contributes £2,000 annually. These prizes are awarded under management of the Provincial Commissions. On the occasion of the shows, the Government buys a number of yearling stallions. These are taken to the stud farm of Mezzöhegyes and kept until four years old, when the best are sold for moderate sums, payable in instalments, to those communities specially interested in breeding.

Private Stud Farms.

The principal ones in Hungary are about 150 in number. In these thorough-bred and half-bred English and Arabs are bred, also crossed Arab, English, Spanish, Hungarian, and Norman breeds. These studs contain more than 5,000 well-bred mares.

Horse fairs.

Horse fairs are held annually in fifty different places, and the number of horses brought for sale averages yearly over 100,000.

Organisation of the Military Divisions of the Stud Branch employed in Government Breeding establishments.

These are subordinate to the Minister of War in all purely military matters, to the Minister of Agriculture in questions relating to breeding and economical administration, and to the General or Military Commander of their respective districts in all questions of military police regulations. The employment of the military division or its individual members with the army is entirely dependent on the consent of the Ministry of Agriculture.

The *personnel* of the military divisions consists of—

(*a*) Field and company officers ;

(*b*) Military surgeons ;

(*c*) Paymasters and accountant, non-commissioned officers ;

(*d*) Veterinary surgeons and farriers ;

(*e*) Foremen and technical employés ;

(*f*) Non-commissioned officers and men (soldiers).

The strength of the military division varies according to requirements, and is determined by the Ministries of War and Agriculture.

The composition and distribution of the military *personnel* of the various breeding establishments is as follows :—

Military Inspectorate.—1 general, 1 field officer, 3 sergeant-majors, 2 servants.

Mezöhegyes.—1 field officer, 3 captains, 9 lieutenants, 1 chaplain, 2 surgeons, 1 paymaster, 5 veterinary surgeons, 12 farriers, 2 foremen, 2 technical employés, 57 technical soldiers, 4 sergeant-major clerks, 23 sergeant-majors, 7 sergeants, 63 corporals, 2 trumpeters, 451 soldiers (for stable management, &c.), 17 servants, 100 drivers, 108 "Csikos" (specially enlisted herders), and 379 "Beresen" (specially enlisted rough riders): total 1,264.

Kisber and *Babona.*—*Personnel* : 1 field officer, 3 captains, 5 lieutenants, 1 chaplain, 2 surgeons, 1 paymaster, 5 veterinary surgeons, 4 farriers, 2 sergeant-major clerks, 10 sergeant-majors, 8 sergeants, 19 corporals, 2 trumpeters, 219 stud soldiers, 13 servants, 39 drivers, and 68 Csikos : total 411.

Fogaras.—1 field officer, 1 captain, 2 lieutenants, 1 surgeon, 1 paymaster, 1 veterinary surgeon, 3 farriers, 1 accountant sergeant-major, 3 sergeant-majors, 2 sergeants, 8 corporals, 33 stud soldiers, 6 servants, 8 drivers, 28 Csikos : total 99.

Stallion depôt of *Stuhlweissenberg* with 6 sub-depôts.—1 field officer, 2 captains, 7 lieutenants, 1 surgeon, 1 paymaster, 3 veterinary surgeons, 6 farriers, 123 non-commissioned officers, 410 stud soldiers, 12 servants : total 566.

Nagy-Koros with 4 sub-depôts.—1 field officer, 4 captains, 5 lieutenants, 1 paymaster, 1 surgeon, 4 veterinary surgeons, 6 farriers, 123 non-commissioned officers, 410 stud soldiers, 12 servants : total 567.

Debreczin with 4 sub-depôts.—1 field officer, 4 captains, 5 lieutenants, 1 surgeon, 1 paymaster, 4 veterinary surgeons, 5 farriers, 99 non-commissioned officers, 310 stud soldiers, 12 servants : total 442.

Szepsy-szent-Gyorgy with 4 sub-depôts.—1 field officer, 1 captain, 4 lieutenants, 1 paymaster, 1 surgeon, 1 veterinary surgeon, 4 farriers, 61 non-commissioned officers, 170 stud soldiers, 8 servants : total 252.

Warasdin with 2 sub-depôts.—1 field officer, 2 lieutenants, 1 surgeon, 1 paymaster, 1 veterinary surgeon, 2 farriers, 26 non-commissioned officers, 87 stud soldiers, 6 servants : total 128.

(*a*) Field and company officers of the stud branch form a special list for pay and promotion, and join and are promoted according to the regulations existing for the stud branch.

(*b*) The medical service is performed by a special and permanent staff of surgeons, or by surgeons of the retired list, or by civilian surgeons hired by the year.

(*c*) The account or pay officers is part of the general list of officers of this branch, but are permanently attached to the stud branch. They are recruited by promotion of the accountant non-commissioned officers, and by transfer from the general list.

(*d*) The veterinary surgeons of the stud branch are as a rule permanently employed in the service, but form a separate list for pay and promotion. They are recruited by transfer from the army or by promotion of qualified farriers, &c.

(*e*) The foremen and technical employés are recruited by transfer and promotion of suitable soldiers of the stud branch division or by transfer from the army.

(*f*) The enlisted men of the stud branch are recruited throughout all Hungarian provinces. They serve three years, and are then transferred to the reserve of the military train. Men between 5 feet 2 inches and 5½ feet are selected for this service if they are accustomed to horses. The transfer of non-commissioned officers from the army to the stud branch can only be after three months' preliminary service.

Military inspections

The Military Inspector of the stud branch exercises a supernumerary command over all the military divisions of the breeding establishments and their dependencies within the limits prescribed by regulation. He performs the functions of a brigadier in all purely military matters, in economy, administration, &c., such as muster and the inspection of central officers ordered by the Ministry of Agriculture. It is his duty to see that all orders of the Ministry of Agriculture pertaining to horse breeding are strictly carried out by the stud farms and stallion depôts. The economical administration of the breeding establishments is managed directly by the Minister of Agriculture; but the Inspector exercises a supervision over the same, and must report all irregularities to the Ministry. He makes military, technical, and economical inspections twice a year, and oftener when ordered by the Minister of Agriculture, and submits reports of his inspections to the two ministries. He regulates the daily programme of the military and technical instructions of the enlisted men of the military divisions, the technical instructions being in accordance with the orders of the Ministry of Agriculture. His special duties are—

(*a*) To superintend discipline and performance of duty in the breeding establishments, for which purpose he has the disciplinary rights of a regimental commander.

(*b*) To see to the proper quality of the clothing and equipment and food issued to the military divisions, and to supervise the payment, quartering, and medical attendance of the *personnel*.

(*c*) To receive and examine the muster rolls of the military divisions, and to send the same to the two ministries.

(*d*) To prepare the descriptive records of all the field officers, senior captains, adjutants, and captains in independent commands of the stud branch. The individual records are laid before the Ministry of War, and, after examination by a board, are sent to the Ministry of Agriculture for its information and remarks as regards the performance of duties veterinary and technical.

(*e*) He endorses the qualification records prepared by the commanders of military divisions of their subordinate lieutenants, paymasters, surgeons, and veterinary surgeons; submits the same to the Ministry of Agriculture for inspection and remark, and then forwards them to the Ministry of War.

(*f*) He grants leave to officers and takes the preliminary steps in case of retirement.

Pay, &c.—The military *personnel* of the stud branch receive the same pay as those of equal rank in the army, and such special allowances as are granted by the Ministry of Agriculture.

Appointment of officers.—These are appointed—

(*a*) By transfer of suitable officers from cavalry and military train;

(*b*) By promotion of cadets of the stud branch.

Transfer of officers.—Officers of the cavalry and train desiring to be transferred to the stud branch must have the following qualifications:—

(1) To be able to speak and write Hungarian or Slav.

(2) Must have at least three years' service in a regiment with a good report, a certain amount of horse knowledge, and generally show a fitness for employment in the stud branch.

(3) Must pass a satisfactory examination before a commission of officers under the presidency of the Military Inspector of the Military Veterinary Institute at Buda Pesth.

(4) Must undergo six months' probation in a military division of the stud branch.

Officers and cadets wishing to be transferred to the stud branch are given a year's leave in which to prepare for examinations. The technical examination for admission into the stud branch comprises the following subjects :—

1. Anatomy, physiology, dietetics, exterior, and age of the horse.
2. Breeding of animals.
3. Special horse-breeding.
4. Horse-shoeing.
5. Veterinary medicine.
6. Agriculture.
7. Military administration.
8. Riding and driving.

The examinations are held once a year by a commission consisting of—

The Military Inspector of the stud branch.

The Director of Military Veterinary Institute of Pesth.

Professors of the Institute.

Representatives of the Ministry of Agriculture.

Rough riding and training detachments of the stud farms.—These consist of peasant boys of 13 to 17 years of age enlisted specially for grooms. They are clothed, fed, and instructed; receive on joining about 3*s.* 6*d.* a month; after they have learnt their duties, about 5*s.* a month. These boys mostly become good horsemen and grooms, and after a period of military life and education form an excellent class, whence are obtained good cavalry and train non-commissioned officers. There are 20 detachments of these boys employed.

Each stud farm has an administrative building, barracks, officers' quarters, store-houses, stables, covered and uncovered riding schools, and is divided into a number of sections. Each section contains a herd and detachment of herders (usually 1 non-commissioned officer, 1 corporal, and from 7 to 8 Csikos), a barrack, a stable, and separate pasture. The stable section is a brick building without stalls.

The main stables of the stud are equipped with all the most modern improvements, and are wonderfully clean and comfortable. As is well known, Hungary turns out wonderful cavalry horses. They are very strong, with great stamina, and stand fatigue, combined with short rations, better than any other horse. About four-fifths of the cavalry horses of the Imperial army come from Hungary.

With the present number of stallions and mares, Hungary could export from 30,000 to 60,000 horses annually.

No. 48-M-D., dated 16th September 1892.

From—Inspecting Veterinary Surgeon J. H. B. Hallen, Inspector-General, Civil Veterinary Department,

To—The Secretary to the Government of India, Military Department.

In continuation of my report No. 31-C., dated 22nd August 1892, copy attached, and in compliance with the instructions contained in unofficial notes marginally* quoted, I have the honor to submit the following suggestions with

* Military Department unofficial No. 4284-D., dated 10th September 1892, marked A.

regard to the obtaining next year of a few Arab and half-bred Arab stallions from the studs of the Hungarian Government.

2. It will be observed that Herr Stockinger in his letter, dated 13th ultimo, to my address states that the price of stallions selected for the Indian Government will be 2,000 florins each, and that a communication on the subject will be addressed to me from Buda Pesth, whither he was proceeding. This promised letter I will on receipt submit to the Government of India.

3. Taking it for granted that the price of stallions will be settled at 2,000 florins as above indicated, I would suggest that a selected officer be sent next April or May to Buda Pesth with instructions to wait upon the Minister of Agriculture, Count Bethlen, so that the necessary orders may be issued by the Government of Hungary for stallions available to be inspected by the British officer, and that he be allowed to select suitable stallions at 2,000 florins each. I believe Herr Stockinger had arranged with the late Councillor de Kozma, of the Hungarian Ministry, that a number up to six stallions might be selected by the officer deputed by the Indian Government.

4. I would advise the officer visiting all the studs marginally* noted, and in order that he may take due time in his inspections, and not be hurried in so important a duty, I beg to recommend that he may be allowed to remain at least two months in Hungary that he may have ample time to satisfactorily perform the duty.

* Babona | Fogaras
Kisber | Mezzohegyes

5. Stallions purchased for the Indian Government may be sent from the studs *viâ* Buda Pesth by railway to Trieste, and there shipped on an Austrian Lloyd steamer to Bombay. The cost of transit will be, I believe, from £10 to £15 each horse, *plus* forage bill and wages of grooms and their fares to and from Bombay. I feel assured that the officer will be rendered all assistance with regard to obtaining the services of grooms to go in charge of the horses from the stud depôts to Bombay.

6 It will be for the Government of India to judge whether the officer deputed be ordered to proceed direct from India to Buda Pesth with letters from the Government of India to the British Consul at Buda Pesth explaining the duty given to him to perform, or whether it will be advisable for him to proceed to London, and there receive instructions from the India Office with the usual credentials from the Foreign Office to the British Consul at Buda Pesth.

7. With regard to the obtaining of superior Arab stallions direct from Arabia or Syria, I am submitting a separate communication on the subject.

No 47-M D, dated 16th September 1892

SECTION I (MILITARY)—APPENDIX II.

Referred to in paragraph 8, page 3.

No. 47-M. D., dated 16th September 1892.

From—The Inspector-General, Civil Veterinary Department,

To—The Secretary to the Government of India, Military Department.

Referring to the unofficial notes No. 4248-D., marked B., dated 10th September 1892, by the Hon'ble Military Member of the Viceroy's Council as to measures that may be adopted with the view of obtaining first class stallions direct from Arabia or Syria, I have the honor to submit the following suggestions.

2. Doubtless the surest and best way of obtaining such horses would be to depute a selected officer having a bent for the duty, and known as a good judge of the Arab horse, to purchase the best Arabs found for sale. To perform this duty satisfactorily, some time, say 6 or 8 months, should be given to the officer, as probably he would find it safer to return with the stallions purchased in South Arabia to the Persian Gulf, and thence ship them to Bombay, and afterwards proceed *viâ* Karachi, Aden, and Port Said to Syria, where he would commence his search in Syria and Northern Arabia, and return *viâ* Damascus to Port Said, and thence ship the second batch of horses to Bombay.

3. Another course may be adopted, *viz.*, to offer a reliable Arab horse dealer in Bombay—reliable for his honesty as well as his knowledge of Arab horses—good liberal prices, say from Rs. 3,000 to Rs. 5,000, for every Arab approved by the Civil Veterinary Department as suitable for Government stud purposes.

4. The time was when no difficulty was experienced in finding reliable Arab gentlemen in the horse trade to undertake such a commission; but during recent years the Arab horse market in Bombay has fallen in the hands of men unknown as judges of horses, and of a different class to the Arab gentlemen horse dealer of former times. Still there are one or two men who, I believe, may be trusted, and I beg to advise that an offer on the lines above indicated may be made to the men marginally named, with the strict understanding that only *first class* Arabs, showing undeniable blood, shape, and good bone of leg, will be accepted, and I further suggest that they may be informed that from 10 to 15 stallions of the described stamp will be required.

Jasim bin Fid.
Ali bin Amer.

5. In the event of the Government of India approving of either measure above proposed on account of the very pressing demands for good Arab stallions, and the great difficulty of finding such horses now-a-days ordinarily imported, I earnestly solicit that the necessary action for carrying out either proposal may at once be adopted.

6. At the present date the number of Government stallions is 100 short of the sanctioned strength (309) in Northern India (not including Bombay), and I expect that not more than 40 of the 77 English horses indented for from England will be sent out this season. Moreover, the want of good Arab sires is much felt in the breeding districts, and so I hope to be pardoned for stating the demand for more Arab stallion power is imperative to allow of the horse-breeding industry being duly kept up.

No. 4 M. D., dated 22nd January 1893.

From—The Inspector General, Civil Veterinary Department,

To—The Secretary to the Government of India, Military Department, Calcutta.

I have the honor to report for the information of the Government of India, having purchased during the months of November and December 1892 18 Arab stallions for Government stud purposes. Several of these horses are of a very superior stamp, and the rest of good quality and shape and suitable for stud work.

2. About (2,000) two thousand so called Arab horses have been imported into Bombay this season ; but most of them have been of common, very common, Persian Gulf breeds, and a great many of them small, under 14 hands in height.

3. In order to secure the horses I have purchased, it was necessary for me to make several visits to Bombay so as to inspect the horses, batch by batch, on arrival from the Persian Gulf, as the stable keepers had promised me the pre-emption of the horses ; therefore I inspected each batch after arrival as soon as possible.

4. Adverting to previous reports submitted by me to the Government of India, I have to again express my regret at the unsatisfactory state of the Arab horse mart of Bombay. Year by year more horses of low quality and stamp are being imported. Indeed, they are generally of the most common type of Arab and cross bred Arab, and this fact rests upon the old dealers (I mean the dealers and their sons who have during the last 40 years been importers) not, with one or two exceptions, remaining in the trade. These men were Arab gentlemen of the " Mahomed Bawker, " "Abdool Rahman Minnie," " Jassim bin Feed," and " Sulaiman bin Jassim " class. They and their relatives were accustomed yearly to go to the interior of the deserts of Arabia and buy the best of real— " Asil "—Arab horses available. Now-a-days very few horses are so obtained, but as a rule are bought on or near the coasts.

5. Referring to an unofficial file in which I have suggested that a worthy Arab dealer might be induced to import next season some superior Arabs of good caste and power, and he should be promised prices in his opinion remunerative, I beg to report that I have had personal interviews with Jassim bin Feed on this subject, and I have noted down on the appended sheet terms on which he agrees to bring in October or November 1893 15 or 20 really good horses for my pre-emption, and at prices for the different horses at their respective merits, and that he believes the top price to be received by him will not exceed Rs. 1,500.

6. I have accordingly informed Jassim bin Feed that I will, with the sanction of the Government of India, inspect these horses to be imported by him shortly after their arrival, and those I may deem suitable and fit for Government stud work I will value according, in my opinion, to their respective worth, and it will be optional to him to accept or refuse the prices I may put on them.

7. I hope this measure will meet with the approval of the Government of India.

Dated Bombay, 24th November 1892.

Memo. by—The Inspector General, Civil Veterinary Department.

After several conversations between Veterinary Lieutenant-Colonel J. H. B. Hallen and Jassim bin Feed this morning, Jassim bin Feed called at the Byculla Club, and on Veterinary Lieutenant-Colonel Hallen again speaking to him of the dearth of really good Arab stallions in the Bombay market, the Superintendent, Mr. J. B. D'Silva, of the Office of Inspector-General, Civil Veterinary Department, who was present at the interview, noted down as follows :—

Jassim bin Feed said that as he had signed an agreement with Essa Khaliffa, the Arab stable keeper in Byculla, to be manager of his stables for one year, he was unable to go to Arabia this year, but that he will make arrangements with an Arab dealer to bring really good Arab horses, the true high caste Anaiza and other breeds, next October or November 1893.

Jassim bin Feed explained that during the months of March and April there is a large fair held in Arabia at a place called Halab, where the best Arab horses are brought for sale. The fair lasts for about two months. The Bedouins collect annually at this place. It takes 40 days to get to Halab from Bombay, *viz.*, 15 days by sea to Bassora, 3 days by sea to Bagdad, and 22 days by road to Halab.

Jassim said that the high caste Arab, 14-3 to 15 hands in height, 4 or 5 years old, 8 inches shank, and 68 or 69 inches in girth, could be bought in Arabia for about 80 guineas, or say Rs. 1,100. The expenses thence to

Bombay would be about Rs. 200, to which add another Rs. 200 as profit, equal to Rs. 1,500 landed in Bombay.

Jassim states that there is no question of agreement or advance of money. He is willing to arrange for a batch of about 15 or 20 good Arabs to be imported to Bombay, and that Veterinary Lieutenant-Colonel Hallen can only purchase those that he may approve and consider suitable for Government stud purposes.

Veterinary Lieutenant-Colonel Hallen promised to let Jassim bin Feed know from Calcutta on or about 14th December 1892.

The horses to be between 4 and 5 years of age; of colors bay, chestnut and brown; not less than 8 inches under knee; 68 inches girth, and 14 hands 2 inches high; grey and black colors are not desired.

No. 699 D., dated Calcutta, 14th February 1893.

From—The Deputy Secretary to the Government of India, Military Department,

To—The Inspector-General, Civil Veterinary Department, Meerut.

In reply to your letter No. 4 M. D., dated 22nd January 1893, I am directed to state that the Government of India entirely approve of the arrangements made by you with Jassim bin Feed in order to induce him to import next season a few really good Arab stallions for Government stud work.

No. 1 M. D., dated 10th January 1894.

From—The Inspector-General, Civil Veterinary Department,

To—The Secretary to the Government of India, Military Department.

I have the honor to report, for the information of the Government of India, that during my recent visit to Bombay in November and December 1893 I obtained 12 Arab horse stallions for the Civil Veterinary Department suitable for Government stud purposes, and I also purchased 6 stallions for the Babugarh Instruction Farm, 10 for the North-Western Provinces Government, and 3 for Court of Wards and Native States.

2. Referring to this office letter No. 4 M. D., dated 22nd January 1893, I regret to state that the arrangement made by Jassim bin Feed with a horse dealer to import good Arab stallions for purchase by the Government of India was not a success. However, Jassim bin Feed afforded me every assistance, and by his exertions I was enabled to secure 3 or 4 very good Arab stallions.

3. In the memorandum attached to my letter quoted above, it has been explained why Jasim bin Feed was unable to visit Arabia himself; but as he has now left the employ of Essa Khaliffa, with whom he had signed an agreement to be manager of his stables for 12 months, Jasim bin Feed is prepared to go to Arabia this year to import good Arab stallions for purchase by the Government of India under the conditions reported in my No. 4 M. D. of 22nd January 1893. I therefore solicit that the sanction contained in your Department letter No. 699 D., dated 14th February 1893, may be extended to apply to next official year 1894-95.

No 584 D., dated 30th January 1894.

From—The Deputy Secretary to the Government of India, Military Department,

To—The Inspector-General, Civil Veterinary Department.

In reply to your letter No. 1 M. D., dated 10th January 1894, I am directed to inform you that the Government of India approve of your making arrangements with Jassim bin Feed for importing during 1894-95 a few good Arab stallions for Government stud work on the same terms as those sanctioned for 1893-94.

No. 38 C., dated 14th January 1894

Demi-official from—The Inspector-General, Civil Veterinary Department,

To—Jassim bin Feed, Arab Stables, Bombay.

Do you intend going to Arabia this season to purchase really good high class Arabs described by you to me in that memo., dated 22nd January 1893, I sent to the Government of India?

As I told you last month when in Bombay, any really good Arab stallions up to 15 in number, of the kind required and approved by the Civil Veterinary Department, will be purchased by the Government of India.

Please reply by return of post, and address reply to Meerut.

No. 229 M., dated 12th February 1894.

From—The Inspector General, Civil Veterinary Department,

To—JASSIM bin FEED, Arab Stables, Bombay.

In continuation of this office letter No. 38 C., dated 14th January 1894, I shall feel obliged by your letting me know, as early as possible, if you intend going to Arabia this season to purchase really good high class Arab stallions, and, if so, whether you are prepared to accept the undermentioned conditions for the supply of Arab stallions to the Civil Veterinary Department :—

(*a*) That any really good Arab stallions up to 15 in number, of the kind required and approved by the Civil Veterinary Department, will be purchased by the Government of India.

(*b*) The horses to be of the high caste Arab breed, between four and five years of age ; of colors, bay, chestnut, and brown ; not less than eight inches under the knee, not less than 68 inches in girth, and not less than 14 hands 2 inches in height. Grey and black colors are not desired.

(*c*) Average price not to exceed Rs. 1,500 for each horse purchased. Only those horses that may be deemed by the Inspector General, Civil Veterinary Department, or his Deputy as suitable and fit for Government stud work will be valued according to their respective worth, and it will be optional to you to accept or refuse the prices put on the selected horses.

(*d*) No agreement or advance of money will be made by the Civil Veterinary Department.

(*e*) On your informing the Inspector General, Civil Veterinary Department, of the arrival of the horses in Bombay, arrangements will be made as early as possible to inspect them.

2. Please acknowledge the receipt of this, and state whether you accept the terms herein noted.

Dated 24th January 1894.

From—JASSIM bin FEED, Arab Stables, Bombay,

To—The Inspector General, Civil Veterinary Department.

I am in receipt of your No. 38 C. of 14th, and in reply beg to say that I hope to proceed to Arabia in April, and will bring the required number of stallions from which you may have the pick.

I would have gone earlier only that Mr. Oomer Jamal has some very pressing work. Pray excuse my not replying earlier than this.

Dated 14th February 1894.

From—The Inspector General, Civil Veterinary Department,

To—JASIM BIN FEED, Arab Stables, Bombay.

I have received your letter of 24th ultimo stating that you hope to proceed to Arabia in April, and will bring the required number of stallions from which I may have the pick, and it has been recorded in my office.

I hope you will bring from Arabia really very superior Arab stallions, and thus gain credit from the Government of India.

Section I (Military)—Appendix III.

(Referred to in paragraph 12, page 4.)

HORSE-BREEDING.

Casualty Roll of Government Horse Stallions in the Bengal and Bombay Presidencies during the official year 1892-93.

Serial No	Brand No.	English Name.	Native name.	Class.	Description of casualty.	Date of casualty.	Nature of casualty.
		Bengal	*Presidency.*				
1	2030	Felix	Goomti Pershad ...	N. T. ...	Died	10th April 1892 ...	Colic.
2	2228	... ...	Shikarpur	C. B. ...	Destroyed	1st May " ...	Paralysis.
3	2150	Godolphin	Fatehgarh	T. B. E. ...	Ditto	" " " ...	Nasal gleet.
4	1959	King Cole	Raja Ram	N. T. ...	Ditto	" " " ...	Old and worn out.
5	1967	Hungarian	Umda	Arab ...	Died	6th July " ...	Cystic calculus.
6	2321	Bay Sultan	Kumait Shah	N. T. ...	Do	21st August " ...	Mesenteric hernia.
7	1950	Lottery.	Ya Nasib	N. T. ...	Destroyed	24th " " ...	Injury to spine.
8	2300	Minuet	Minar	¾ bred ...	Died	4th September " ...	Insolatio.
9	1919	Lord Chelmsford ...	Suba	N. T.	Destroyed	6th " " ...	Old and worn out.
10	1922	Sharpshooter	Tirandaz	N. T. ...	Ditto	" " " ...	Ditto.
11	1954	Victor	Bhim	N. T. ...	Ditto	9th " " ...	Ditto.
12	1891	Stuart	Karinda	T. B. E. ...	Ditto	" " " ...	Ditto.
13	1829	Lorne	Sirdar Bahadur	T. B. E. ...	Ditto	13th " " ...	Ditto.
14	2183	.....	Tigris	Arab ...	Died	17th " " ...	Fever.
15	1815	Robin	Deodar	N. T. ...	Destroyed	20th October " ...	Old and worn out.
16	1987	.....	Pasha	Arab ...	Ditto	3rd " " ..	Ditto.
17	2332	Norfolk Admiral ...	.....	H. B. E. ...	Died	20th November " ...	Died at Bombay. Fever
18	1972	Rifle	Dakoo	N. T. ...	Destroyed	16th " " ...	Old and worn out.
19	1924	Nimrod	Zalim Singh	N. T. ...	Ditto	29th " " ...	Ditto.

20	2121	Sir Francis	Shikarpur	T. B. E ...	Died	17th December „ ...	Cystic calculus.
21	2264	Duhart	Dilgir	T. B E. ...	Do.	13th „ „ ...	Reflex paraplegia.
22	2165	Hussar	Jangi sawar	Arab ...	Destroyed	30th January 1893 ...	Nasal discharge.
23	1845	The Black Prince .	Maya Ram	N T. ...	Ditto	19th February „ ...	Old and worn out.
24	1737	Young Hero	Peeltun	N. T. ...	Ditto — ...	23rd „ „ ...	Ditto.
25	1788	Wild Buck	Junglee Haran	N. T. ...	Ditto	17th March „ ..	Ditto.
26	1900	Grendon	Naini Tal	T. B. E. ...	Ditto	„ „ „ ...	Ditto.
27	1762	American	Afzal	N. T. ...	Ditto	„ „ „ ..	Ditto.
28	2003	.....	Arbeyla	Arab .	Ditto	„ „ „ ...	Ditto.
29	2203	Pumpkin	Kuddoo	T B. E. ...	Ditto	23rd April 1892 ...	Colic.
30	2262	Killaloe	Khurkoo	T. B. E. ...	Died	9th June „ ...	Do.
31	1827	Gunboat	Golab Singh	N. T. ...	Do.	„ „ „ ...	Enteritis.
32	2301	Buskin	Chuppul	N. T. ...	Do.	11th December „ ...	Hydrophobia.
33	1963	Viscount	Ranaji	Arab ...	Do	6th May „ ...	Colic.
			Bombay	*Presidency.*			
34	...	Despatch	.....	N. T. ...	Died	31st July „ ...	Paralysis.
35	...	Gold Mohur	.....	Arab ...	Do.	22nd September „ ...	Ditto.
36	...	.....	Zamindar	Do. ...	Do.	22nd October „ ...	Anthrax.
37	...	Baltic	.....	Do. ...	Do.	4th December „ .	Rupture of diaphragm.

ABSTRACT.

Presidency.	Province.	Number killed	Number destroyed.	Total.	Average death.	Average destroyed.	General average.
Bengal	North-Western Provinces ...	8	20	28	4 85	7 46	12 31
	Punjab	5	...	5			
Bombay	Deccan	1	...	1	5·40	...	5·40
	Guzerat	1	...	1			
	Sind	2	...	2			

Section I (Military)—Appendix IV.

(Referred to in paragraph 14, page 4.)

HORSE-BREEDING.

Statement of Government Horse and Pony Stallions sold in the Bengal and Bombay Presidencies during the official year 1892-93.

Serial No.	Brand No.	English name.	Native name.	Class.	Date of sale.	Name of purchaser.	Amount sold for.	REMARKS.
		Bengal	*Presidency.*				Rs. A. P.	
1	2220	Revenge ...	Budla	N. T. ...	8th December 1892...	Furdoonji	150 0 0	Spavined. Not fit for stud purposes.
2	2211	.....	Kalam ...	Arab ...	" " " ...	Babu Rajendra Nath Dey ...	435 0 0	Ditto. ditto ditto.
3	2313	.....	Surkhab ...	Do. ...	5th January 1893 ...	Multan District Board ...	1,017 0 0	For stud purposes.
4	2098	.....	Gurkha ...	Do. ...	24th February " ...	Umballa District Board ...	300 0 0	Ditto.
5	2326	White stockings ...	Sufed Posh ...	Do. ...	27th January " ...	.....	250 0 0	Ditto.
6	2357	.....	Bhut Titar ...	Do. ...	8th December 1892...	.....	317 0 0	Ditto.
7	2358	.....	Tilaur	Persian ...	" " " ...	.....	267 0 0	Ditto.
8	2359	.....	Chikara ...	Arab ...	" " " ...	.....	267 0 0	Ditto.
9	2356	.....	Kabootar ...	Do. ...	23rd November " ...	.....	592 0 0	Ditto.

10	2360	.....	Fakhta ...	Persian ...	8th December „	.....	417 0 0	Ditto.
11	2395	.....	Chogad ...	Arab ...	8th March 1893 ...	.....	417 0 0	Ditto.
12	1936	Piano	Bindrabun ...	T B. E ...	11th August 1892 ...	Captain C. B. Watkins ...	400 0 0	Spavins both hocks.
13	2136	Silvius	Monghyr ...	Do. ...	„ „ „ ...	Mr. Scott	1,250 0 0	Spavins both hocks; ring-bones both hind pasterns.
14	2185	Falmouth ...	Etawah... ...	Do. ...	„ „ „ ...	Major Scott-Chisholm ...	1,800 0 0	Ring-bones off fore and off hind; spavins both hocks.
15	2218	Football ...	Gola	Do. ...	„ „ „ ...	Ditto ditto	1.550 0 0	Spavins both hocks affecting action.
16	2219	Osric	Khooni ...	Do ...	8th December „ ...	Captain Malcolm	170 0 0	Spavins both hocks.
17	2001	Wizard ...	Outar	N. T. ...	11th August „ ...	Mr. Ellis	205 0 0	Splint off fore; spavins both hocks affecting action.
18	1212	.....	Dawat	Arab ...	„ „ „ ...	Mr. Scott	625 0 0	Pigeontoed; twisted near fore leg; spavin off hock; ring-bone both hind.
		Bombay	*Presidency*					
	...	.....	Khatan	Arab ...	2nd January 1893 ...	(Not known)	100 0 0	Uncertain foal getter.
	...	Clipper ...	.....	Do. ...	6th „ „ ...	Mr. Dada Teli	106 12 0	Ditto.
	...	.....	Sirdar	Do. ...	6th „ „ ...	K. B. Framji Ardesar ...	129 12 0	Ditto.
	...	Diamond ...	.....	Pegu ...	18th „ „ ...	Madras Government	300 0 0	Too small for mares in Bombay Presidency.

Section I (Military)—Appendix V.

(Referred to in paragraph 20, page 6.)

List of Government Horse and Donkey Stallion Stands abolished and established during the year 1892-93.

Stands abolished.			Stands established.		
Horse or Donkey stand.	Name of stand.	In the district of—	Horse or Donkey stand.	Name of stand.	In the district of—
	Bengal Presidency.				
	North-Western Provinces.				
Horse and Donkey	Aonla ...	Bareilly.	Horse and Donkey	Kasumra ...	Bareilly
Horse ...	Masuda ...	Ajmere.	Do. do.	Bhikanpur ...	Aligarh.
			Do. do.	Kandhla ...	Muzaffarnagar.
			Horse ...	Deoli ...	Deoli.
			Donkey ...	Naraingarh ...	Umballa.
	Punjab.				
Donkey ...	Rehlu ...	Kangra	Horse ...	Bannu ...	Bannu.
Ditto ...	Indora ...	Ditto	Donkey ...	Nurpur ...	Kangra.
			Do. ...	Kangra ...	Ditto.
	Bombay Presidency.				
Horse ...	Supa ...	Poona	Horse ...	Dhond ...	Poona.
Do ...	Karachi ...	Karachi	Do. ...	Hyderabad ...	Hyderabad.
Do. ...	Phuleji ...	Baluchistan.	Do. ...	Barkhan ...	Baluchistan.
Pony ...	Dharwar ...	Dharwar	Do ...	Zhal ...	Ditto.
Donkey ...	Shikarpur ...	Shikarpur	Do ...	Shoran ...	Ditto.
Do ...	Sukkur ...	Ditto	Donkey ...	Sirur ...	Poona.
Do. ...	Kukkur ...	Ditto.	Do. ...	Deesa ...	Palanpur Superintendency.
Do ...	Sibi ...	Baluchistan.	Do. ...	Hyderabad ...	Hyderabad.
			Do. ...	Rawat Khan ...	Shikarpur.
			Do. ...	Nasirabad ...	Ditto.

Section I (Military)—Appendix VI.

(Referred to in paragraph 32, page 7).

Horse-Breeding.

Statement showing cost of feed, keep, attendants, &c., of Government Horse Stallions in the Bengal and Bombay Presidencies during the official year 1892-93.

Presidency, Province, and District.	Number of stallions or days.	Total annual cost.	Average per horse stallion per annum.	General average in each Presidency.	Remarks.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	
Bengal Presidency.					
North-Western Provinces.					
Babugarh Depôt	24,145	16,494 15 2	249 5 8	...	
Meerut	5,600	3,806 7 10	248 1 7	...	
Bulandshahr	2,523	1,619 7 10	234 4 7	...	
Saharanpur	3,440	2,385 6 11	253 1 8	...	
Muzaffarnagar	4,193	2,942 2 5	256 1 9	...	
Aligarh	2,870	1,958 10 1	249 1 6	..	
Muttra	698	452 11 0	236 11 6	...	
Agra	845	482 5 0	208 5 4	...	
Etah	50	28 3 10	206 2 4	...	
Shahjehanpur	951	628 12 6	241 5 3	...	
Budaon	1,519	936 3 1	224 15 3	...	
Bareilly	807	521 13 4	236 0 4	...	
Moradabad	1,480	983 12 5	242 9 10	...	
Bijnor	362	247 4 6	249 5 3	...	
Gurgaon	802	527 1 3	239 14 0	...	
Delhi	261	173 10 11	242 14 2	...	
Kurnal	1,709	1,109 7 3	236 15 2	...	
Rohtak	542	492 9 11	331 11 4	...	
Hissar	492	359 1 3	266 6 2	...	
Umballa	1,334	1,059 14 9	290 0 1	...	
Etawah	425	290 0 9	249 1 7	...	
Add charges for gear, &c., purchased	...	3,444 2 3	...	...	
Total ...	55,048	40,944 4 3	...	271 7 8	

Statement showing cost of feed, keep, attendants, &c., of Government Horse Stallions in the Bengal and Bombay Presidencies during the official year 1892-93—contd.

Presidency, Province, and District.	Number of stallions or days.	Total annual cost	Average per horse stallion per annum.	General average in each Presidency.	REMARKS.
		Rs. A P.	Rs A. P.	Rs. A. P.	
Rajputana.					
Ajmere	272	190 1 7	255 1 6	255 1 6	
Punjab.					
Hazara	549	468 0 10	311 2 10	...	
Mardan	45	43 3 9	350 10 10	...	
Rawalpindi	4,753	3,558 1 5	273 3 9	...	
Jhelum	1,526	1,129 10 8	270 3 2	...	
Gujrat	1,430	1,012 9 2	258 7 3	...	
Gujranwala	1,034	622 4 9	219 10 8	...	
Sialkot	1,337	642 9 9	175 6 10	...	
Lahore	3,252	2,224 13 1	249 11 4	...	
Amritsar	1,810	1,150 11 5	230 12 4	...	
Gurdaspur	582	385 15 9	242 1 1	...	
Hoshiarpur	487	326 13 7	244 15 6	...	
Jullunder	142	97 8 6	250 11 1	...	
Ludhiana	277	176 9 6	232 11 1	...	
Ferozepore	1,702	1,252 15 10	268 11 3	...	
Jhang	389	299 9 5	281 1 8	...	
Shahpur	2,765	1,874 14 7	247 8 0	...	
Bannu	822	574 2 2	254 15 0	...	
Dera Ismail Khan	373	286 2 7	280 0 4	...	
Probynabad	394	223 4 10	206 13 10	...	
Multan	1,448	1,057 8 1	266 9 0	...	
Muzaffargarh	517	360 14 8	254 12 10	...	
Dera Ghazi Khan	4,461	4,135 0 1	338 5 2	...	
Veterinary School, Lahore ...	91	62 2 3	249 3 11	...	
Babugarh Depôt	7,808	5,816 4 11	271 14 3	...	
Add charges for gear, &c., purchased	...	2,202 2 8	...	...	
TOTAL ...	38,004	29,984 2 3	...	287 15 7	

Statement showing cost of feed, keep, attendants, &c., of Government Horse Stallions in the Bengal and Bombay Presidencies during the official year 1892-93—concld.

Presidency, Province, and District.	Number of stallions or days.	Total annual cost.	Average per horse stallion per annum.	General average in each Presidency.	REMARKS.
BOMBAY PRESIDENCY.		Rs. A. P	Rs. A. P.	Rs. A. P	
Deccan.					
Poona	4,035	4,376 15 11	395 14 11	...	
Ahmednagar	6,734	6,819 4 2	230 6 5	...	
Sholapur	1,095	1,184 9 8	394 13 10	...	
Bijapur	365	314 14 3	314 14 3	...	
Belgaum	365	413 8 6	413 8 6	...	
Dharwar	519	497 6 9	349 13 2	...	
Satara	730	737 9 2	368 12 7	...	
Khandesh	1,825	1,543 1 9	308 9 11	...	
Nasik	1,089	1,054 14 4	353 9 1	...	
TOTAL ...	16,757	16,942 4 6	...	369 0 6	
Guzerat.					
Kaira	357	316 12 0	323 13 6	...	
Ahmedabad	2,715	2,408 9 4	323 12 10	...	
Deesa	730	810 9 0	405 4 6	...	
TOTAL ...	3,802	3,535 14 4	...	339 7 3	
Sind and Cutch.					
Cutch	1,095	1,056 9 3	352 3 1	...	
Karachi	274	394 10 7	525 11 9	...	
Thar and Parkar	274	329 10 11	439 2 9	...	
Hyderabad	720	678 15 5	344 3 1	...	
Jacobabad	2,778	3,689 9 0	484 12 3	...	
Shikarpur	1,460	1,320 5 1	330 1 3	...	
TOTAL ...	6,601	7,469 12 3	...	413 0 7	
Baluchistan.					
Sibi	3,880	3,675 1 7	345 11 7	...	
Quetta	2,978	5,102 7 6	625 6 2	...	
Kelat	...	...	...	...	Returns not received.
Zhob	194	320 3 9	602 8 0	...	
TOTAL ...	7,052	9,097 12 10	...	470 14 2	

ABSTRACT.

Presidency.	Province.	Average in each Province.	Average in each Presidency.	Remarks.
		Rs. A. P.	Rs. A. P.	
Bengal	North-Western Provinces ...	271 1 11	278 2 5	
	Rajputana	255 1 6		
	Punjab	287 15 7		
Bombay	Deccan	369 0 6	395 3 8	
	Guzerat	339 7 3		
	Sind and Cutch	413 0 7		
	Baluchistan	470 14 2		

SECTION I (MILITARY)—APPENDIX VII.

(Referred to in paragraph 38, page 9.)

HORSE AND MULE BREEDING.

Annual Return of Stock in the Bengal and Bombay Presidencies during the official year 1892-93.

Section I (Military)—

(Referred to in paragraph

HORSE AND MULE

Annual Return of Stock in the Bengal and Bombay

DETAILS.	GOVERNMENT HORSE STALLIONS.																GOVERNMENT DONKEY STAL										
	BENGAL.									BOMBAY.							BENGAL.										
	Thorough-bred English.	Three-quarter bred.	Half-bred English and Norfolk Trotters.	Australian.	Arab.	Persian.	Turkoman.	Country-bred.	Total.	Thorough-bred English.	Three-quarter bred.	Half-bred English and Norfolk Trotters.	Arab (horse).	Arab (pony).	Pegu (pony).	Total.	Spanish (Catalonian).	Arab.	Horse-bred.	Country-bred.	Bokhara.	Punjabi.	Italian.	French.	Persian.	Cyprian.	Total.
Balance on 1st April 1892	50	1	120	2	80	1	1	4	268	10	1	9	20	30	1	70	11	58	8	1	4	21	121	11	21	26	282
Increase. Add stallions in Central India	...	...	...	...	6	...	...	1	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Received by importation	7	1	27	...	...	...	...	...	35	2	...	...	...	...	...	2	...	...	...	...	...	...	16	...	...	...	16
Erroneously omitted in last year's return ...	...	...	2	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Purchased in India	...	...	...	2	22	...	...	...	24	...	...	...	3	2	...	5	...	...	...	...	...	1	...	...	...	...	1
Received by transfer from Bombay	1	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Received by transfer from "Donkey colts" ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Received from Army Remount Department ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dropped	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Branded and registered	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Received from other districts	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Received by transfer from "Reserved colts" ...	...	...	...	...	...	...	...	3	3	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
Received by transfer from "Government Horse Stallions."	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Received by transfer from "Donkey fillies" ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Received by transfer from "Depôt Farm" ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Received by transfer from Bengal	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
TOTAL ...	67	2	150	4	108	1	1	8	341	12	1	9	29	32	1	84	11	58	9	1	4	22	139	11	20	26	310
Decrease. Died	6	1	5	...	3	...	...	...	15	...	...	1	3	...	...	4	1	3	1	...	...	...	2	...	1	3	11
Destroyed	4	...	12	...	3	...	...	1	20	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	6
Sold	5	...	2	...	4	...	...	...	11	...	...	...	1	2	1	4	...	...	...	...	...	...	...	...	...	...	...
Erroneously omitted in last year's return ...	1	...	...	...	4	...	...	...	5	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	...	3
Transferred to the head "Donkey mares" ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Transferred to Bombay	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Transferred to the head "Government Horse Stallions."	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Transferred to the head "Government Donkey Stallions."	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Stolen	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Struck off the register	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Transferred to Army Remount Department ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Transferred to "Instruction Farm"	...	...	...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Presented to His Highness the Maharaja of Sirmoor.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Transferred to Bengal	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
TOTAL ...	14	1	20	...	10	...	...	1	52	1	...	2	4	2	1	10	1	10	1	...	...	...	3	...	4	3	22
Balance on 31st March 1893 ...	53	1	130	4	92	1	1	7	289	11	1	7	25	30	...	74	10	48	8	1	4	22	136	11	22	23	288
In North-Western Provinces and Rajputana ...	28	...	61	2	30	1	...	6	131	...	...	...	...	...	...	...	6	16	8	1	...	4	50	4	11	8	110
In Punjab	24	1	58	2	42	...	1	...	128	...	...	...	...	...	...	...	2	32	...	...	4	18	80	7	14	15	178
In Baluchistan	1	...	8	...	14	...	...	...	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In Deccan	...	...	...	...	...	...	...	...	...	6	...	4	11	24	...	45	...	...	...	...	...	...	...	...	...	...	...
In Guzerat	...	...	...	...	...	...	...	...	...	2	...	...	3	5	...	10	...	...	...	...	...	...	...	...	...	...	...
In Sind and Cutch	...	...	...	...	...	...	...	...	...	3	1	3	11	1	...	19	...	...	...	...	...	...	...	...	...	...	...
In Central India	...	...	...	...	6	...	...	1	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL ...	53	1	130	4	92	1	1	7	289	11	1	7	25	30	...	74	10	48	8	1	4	22	136	11	25	23	288

Appendix VII.

38, page 9.)

BREEDING.

Presidencies during the official year 1892-93.

LIONS.							BRANDED MARES, THE PROPERTY OF BREEDERS.					DEPOT FARM.							INSTRUCTION FARM.										
BOMBAY.							BENGAL.	BOMBAY.				BENGAL.							BENGAL.										
Arab.	Bokhara.	Italian.	Persian.	Khorassani.	Cyprian.	Total.	For horse-breeding.	For horse-breeding.	For pony breeding.	For mule breeding.	Country-bred colts reserved for stallions.	Horse stallions.	Pony mares.	Pony and mule colts.	Donkey mares.	Donkey colts.	Donkey fillies.	Total.	Horse stallions.	Horse mares.	Pony mares.	Pony colts.	Pony fillies.	Mule colts.	Mule fillies.	Donkey mares.	Donkey colts.	Donkey fillies.	Total.
4	1	11	4	1	2	23	12,402	5,099	7,426	847	21	1	5	3	12	6	4	31	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14	...	12	...	...	...	...	...	...	...	26
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20	...	...	...	...	...	...	...	...	20
...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	1	...	4	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	1,119	540	380	141	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	497	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	2	...	3	...	13	6	2	30
...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	1	13	5	1	2	26	14,018	6,239	7,815	988	21	1	5	6	11	7	4	37	16	20	16	2	...	3	...	13	6	2	78
...	...	...	...	...	...	...	529	303	795	...	...	1	1	1	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	1	499	275	826	...	...	...	...	...	...	...	...	...	7	...	...	...	...	...	...	...	...	...	7
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	33	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	4	5	13	6	1	30	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	1	...	...	...	...	2	1,065	578	1,621	...	10	1	5	6	14	7	4	37	7	...	...	...	...	...	...	...	...	...	7
3	...	13	6	1	2	24	12,053	5,661	6,194	988	11	...	...	...	...	...	...	...	9	20	16	2	...	3	...	13	6	2	71
...	...	...	...	...	...	...	4,566	...	...	...	6	...	...	...	...	...	...	...	5	10	8	1	...	2	...	7	3	1	37
...	...	...	...	...	...	...	8,387	...	...	...	5	...	...	...	...	...	...	...	4	10	8	1	...	1	...	6	3	1	34
...	...	...	...	...	...	...	...	1,107	22	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	3	...	...	...	3	...	1,029	4,096	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	1	...	...	...	1	...	1,019	1,111	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	9	5	1	2	20	...	2,440	305	966	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	...	13	5	1	2	24	12,053	5,661	6,194	988	11	...	...	...	...	...	...	...	9	20	16	2	...	3	...	13	6	2	71

Section I (Military)—Appendix VIII.

(Referred to in paragraph 47, page 11.)

HORSE-BREEDING.

General Statement showing the results of the year's operations during the official year 1892-93.

Presidency.	Province.	Number of branded mares, the property of breeders remaining on the register on 31st March 1893.	Number of branded mares, the property of breeders, covered by Government stallions.		Number of Government stallions employed at stud work.		Average number of branded mares covered in 1892-93 per stallion employed during the year.	Number of stock, the property of breeders, got by Government stallions foaled during 1892-93, the results of coverings of 1891-92. Total produce.												Number of mares covered in 1891-92, the results of which are known.	Number of Government stallions employed in 1891-92, the results of which, with regard to coverings, are known.	Percentage of produce foaled during 1892-93 to mares covered in 1891-92.	Average number of produce foaled during 1892-93 per stallion employed at stud work in 1891-92.
			During 1891-92.	During 1892-93.	During 1891-92.	During 1892-93.		By Thoroughbred English.	By Half-bred English and Norfolk Trotters.	By Australian.	By Arab.	By country-bred.	By Persian.	By Turkoman.	Deaths and abortions.	Total.	Not held.	Not known.	Total.				
Bengal	North-Western Provinces ...	4,376	3,863	3,755	100	99	37·92	178	639	24	171	45	15	...	...	1,072	...	...	...	3,722	100	28·80	10·72
	Rajputana	190	11	26	3	1	26	...	...	...	...	...	...	...	...	...	...	...	...	11	3	...	...
	Punjab	8,387	4,603	3,817	91	75	50 89	318	702	2	387	...	...	3	...	1,412	...	...	...	4,261	84	33 13	16 81
	TOTAL ...	12,953	8,477	7,598	194	175	43·42	496	1,341	26	558	45	15	3	...	2,484	..	...	...	7,994	187	31·07	13·29
Bombay ..	Deccan	5,725	1,121	1,148	42·26	43 2	26·57	43	43	...	190	...	...	...	185	461	476	184	1,121	937	35 32	49·19	13·05
	Guzerat	2,130	407	330	10·81	10	33	2	2	...	73	...	...	...	8	85	120	202	407	205	5·45	41·46	15·59
	Sind and Cutch ...	2,811	638	556	18·66	17·3	32·08	14	26	...	65	...	...	...	23	128	387	123	638	515	15·61	24 85	8·19
	Baluchistan	1,189	921	1,075	16·94	19·3	55·64	46	62	...	112	...	...	...	13	233	251	431	921	490	9·02	47·55	25 83
	TOTAL ...	11,855	3,087	3,109	88 67	89·8	34 62	105	133	...	440	...	...	...	229	907	1,234	940	3,087	2,147	65·40	42 24	13 86

Section I (Military)—Appendix IX.

(Referred to in paragraph 51, page 11)

Horse-Breeding.

Statement of Remounts purchased during the official year 1892-93.

Presidency.	Remounts purchased by.	Number of Remounts purchased.				Ages of Remounts purchased.											Breeds of Remounts purchased.			
		Horses.	Mares.	Geldings.	Total.	Under 1 year.	1 and under 1½ years.	1½ and under 2 years.	2 years and over.	3 years and over.	4 years and over.	5 years and over.	6 years and over.	7 years and over.	8 years and over.	Total.	Produce of Government stallions.	Class of sire not known.	Country-bred.	Total.
Bengal ...	Army Remount Department	164	184	243	591	3	7	120	317	95	26	14	8	1	...	591	331	257	3	591
	Bengal Native Cavalry	165	375	309	849	...	...	...	9	187	368	182	73	20	10	849	45	747	57	849
	Punjab Native Cavalry	96	103	103	302	...	...	...	15	60	100	81	31	10	5	302	19	250	33	302
	North-Western Provinces Police	...	44	15	59	...	...	...	...	9	32	11	3	3	1	59	59	...	...	59
	Punjab Police	10	18	3	31	...	...	...	...	2	8	10	8	2	1	31	...	...	31	31
	Total ...	435	724	673	1,832	3	7	120	341	353	534	298	123	36	17	1,832	454	1,254	124	1,832
Bombay ...	Remount Rearing Depôt at Ahmednagar ...	22	21	4	47	...	...	...	40	7	...	...	...	...	...	47	39	...	8	47
	Bombay Native Cavalry	182	9	15	206	...	...	...	11	164	...	..	27	...	1	206	17	44	145	206
	Police, Northern Division	10	...	...	10	...	...	...	1	9	...	...	...	...	...	10	...	...	10	10
	„ Central Division	18	...	...	18	...	...	...	...	14	...	...	4	...	...	18	...	15	3	18
	„ in Sind	55	6	9	70	...	...	...	7	54	...	...	8	...	1	70	1	22	47	70
	Total ...	287	36	28	351	...	...	...	62	248	...	...	39	...	2	351	57	81	213	351

Section I (Military)—Appendix X.

(Referred to in paragraph 60, page 13)

Horse-Breeding.

Statement showing the number of colts, the property of zamindars, castrated by district salutris and castrators in the Bengal and Bombay Presidencies during the official year 1892-93.

Presidency.	Province.	District.	Number of colts castrated.	Number of deaths resulting from effects of operation.	Number of male colts castrated.
Bengal ...	North-Western Provinces.	Moradabad	13	...	1
		Bijnor	3	...	...
		Budaon	15	...	9
		Shahjehanpur	8	...	3
		Bareilly	8	...	...
		Bulandshahr	88	...	3
		Meerut	159	...	1
		Muzaffarnagar	94	...	4
		Saharanpur	123	...	12
		Mainpuri	...	...	...
		Aligarh	11	...	...
		Etah	7	...	...
		Muttra	...	...	...
		Agra	4	...	2
	Punjab ...	Umballa	100	...	3
		Delhi	12	...	...
		Gurgaon	1	...	...
		Kurnal	23	...	2
		Rohtak	4	...	...
		Hissar	13	...	1
		Rawalpindi	39	...	29
		Jhelum	21	1	26
		Gujrat	44	...	2
		Gurdaspur	5	...	...
		Dera Ghazi Khan ...	243	...	8
		Multan	102	...	8
		Jhang	20	...	2
		Ferozepore	21	...	4
		Lahore	51	1	3
		Carried over ...	1,232	2	123

Statement showing the number of colts, the property of zamindars, castrated by district salutris and castrators in the Bengal and Bombay Presidencies during the official year 1892-93—concld.

Presidency.	Province.	District.	Number of colts castrated.	Number of deaths resulting from effects of operation.	Number of mule colts castrated.
		Brought over ...	1,232	2	123
Bengal—*contd.*	Punjab ...	Ludhiana	2	...	...
		Shahpur	56	...	5
		Amritsar	18	...	2
		Muzaffargarh	6	...	...
		Total in Bengal Presidency ...	1,314	2	130
Bombay ...	Deccan ...	Poona	16	...	...
		Khandesh	44	...	...
		Ahmednagar	31	...	...
	Gujrat ...	Ahmedabad	12	...	...
	Baluchistan ...	Sibi	113	...	...
		Quetta	110	...	...
		Total in Bombay Presidency ...	*326	...	...

* Besides these, the Ahmednagar salutri castrated 63 colts of the Remount Rearing Depôt at Ahmednagar.

Section I (Military)—Appendix XI.

(Referred to in paragraph 4, page 18.)

MULE-BREEDING.

Casualty Roll of Government Donkey Stallions during the official year 1892-93.

Serial No.	Brand No.	Name.	Breed.	Description of casualty.	Date of casualty.	Nature of casualty.
		Bengal Presidency.				
1	5	Jufti	Arab ...	Died ...	3rd April 1892	Colic.
2	12	Howda ...	Do. ...	Destroyed ...	16th May „	Old and worn out.
3	2	Lall	Do. ...	Ditto ...	13th September „	Ditto.
4	66	Ram Bux ...	Do. ...	Ditto ...	16th October „	Ditto.
5	185	Malwa ...	Home-bred	Died ...	22nd January 1893	Tetanus.
6	...	Hoshiar Pissoo ...	Italian ...	Destroyed ...	3rd February „	Old and worn out.
7	...	Tusweer ...	Arab ...	Died ...	10th March „	Congestion of lungs.
8	119	Tatarpur ...	Italian ...	Do. ...	1st October 1892 ...	Heart disease.
9	214	Amarpatton ...	Do. ...	Do. ...	25th February 1893..	Rabies.
10	40	Samanjang ...	Arab ...	Do. ...	19th April 1892	Fever.
11	323	Rupar ...	Cyprian ...	Do. ...	3rd October "	Congestion of lungs.
12	388	Nawapura ...	Do. ...	Do. ...	20th April „	Fever and rheumatism.
13	393	Mowlaheri ...	Do. ...	Do. ...	23rd March 1893 ...	Colic.
14	193	Faizi	Persian ...	Do. ...	20th October 1892	Colic (rupture of stomach).
15	222	Natore ...	Catalonian	Do. ...	30th May „	Anthrax.
16	81	Barrabasti ...	Arab ...	Destroyed ...	12th June „	Ulna broken.
17	412	Jeddah ...	Do. ...	Ditto ...	6th April „	Old and worn out.
		Bombay Presidency.				
18	...	Boanarges ...	Arab ...	Destroyed ...	17th January 1893...	Chronic laminitis.

ABSTRACT.

Presidency.	Province.	Number died	Number destroyed.	TOTAL.	Average death.	Average destroyed.	General average.
Bengal	North-Western Provinces ...	3	4	7	3·80	2·07	5·88
	Punjab	8	2	10			
Bombay ...	Sind	...	1	1	...	4·16	4·16

Section I (Military)—Appendix XII.

(Referred to in paragraph 4, page 18)

MULE-BREEDING.

Statement of Government Donkey Stallions sold during the official year 1892-93.

Serial No.	Name.	Class.	Date of sale.	Name of purchaser.	Amount sold for.	Remarks.
	Bombay Presidency.				Rs. A. P.	
1	Kandhari	Bokhara ...	12th December 1892 ...	Motilal *walad* Muso Dego ...	48 2 0	Impotent.

Section I (Military)—Appendix XIII.

(Referred to in paragraph 6, page 19.)

MULE-BREEDING.

Statement showing cost of feed, keep, and attendants, &c, of Government Donkey Stallions in the Bengal and Bombay Presidencies during the official year 1892-93.

Presidency, Province, and District.	Number of donkey stallions or days.	Total annual cost.	Average per donkey stallion per annum.	General average in each Province.	REMARKS.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	
BENGAL PRESIDENCY.					
North-Western Provinces.					
Babugarh Depôt	8,673	3,439 9 5	144 12 0	...	
Meerut	4,923	1,619 12 5	120 1 5	...	
Bulandshahr	1,721	535 13 4	113 10 3	...	
Saharanpur	3,933	1,302 4 6	120 13 8	...	
Muzaffarnagar	3,208	1,069 9 7	121 11 1	...	
Aligarh	2,333	741 11 3	116 0 7	...	
Muttra	542	160 13 6	108 5 0	...	
Agra	960	311 14 6	118 9 5	...	
Etah	517	161 14 4	114 4 9	...	
Shahjehanpur	1,073	349 6 6	118 13 8	...	
Budaon	2,008	636 14 3	115 12 3	...	
Bareilly	397	131 6 8	120 13 2	...	
Moradabad	1,822	601 1 6	120 6 8	...	
Bijnor	782	257 9 9	120 3 10	...	
Gurgaon	746	237 4 6	116 1 6	...	
Kurnal	602	194 15 3	118 3 2	...	
Rohtak	546	258 11 4	172 15 1	...	
Umballa	1,827	761 13 8	152 3 3	...	
Hissar	1,242	425 8 10	125 0 11	...	
Add charges for gear, &c., purchased	...	1,643 9 2	...	...	
TOTAL ...	37,855	14,841 12 3	...	143 1 8	

Statement showing cost of feed, keep, and attendants, &c., of Government Donkey Stallions in the Bengal and Bombay Presidencies during the official year 1892-93—contd.

Presidency, Province, and District.	Number of donkey stallions or days.	Total annual cost.	Average per donkey stallion per annum.	General average in each Province.	REMARKS.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	
Punjab.					
Hazara	2,981	1,123 1 7	137 8 2		
Peshawar	882	342 13 3	141 13 11		
Mardan	730	247 10 1	123 13 0		
Rawalpindi	19,165	7,273 14 4	138 8 6	...	
Jhelum	3,878	1,364 12 11	128 7 3	...	
Gujrat	2,614	999 6 8	139 8 9	...	
Gujranwala	1,616	537 5 3	121 5 9	...	
Sialkot	2,190	732 7 5	122 1 2	...	
Lahore	3,344	1,146 3 3	125 1 8	...	
Amritsar	2,707	951 2 0	128 3 11	...	
Gurdaspur	1,692	578 2 3	124 11 5	...	
Hoshiarpur	1,460	544 15 2	136 3 9	...	
Jullunder	1,120	429 15 5	140 1 11	...	
Ludhiana	1,056	411 8 8	142 3 11	...	
Ferozepore	2,445	927 7 6	138 7 3	...	
Jhang	727	307 5 11	154 5 1	...	
Shahpur	2,985	1,100 6 5	134 8 10	...	
Bannu	1,540	856 7 0	162 7 3	...	
Multan	2,207	778 3 1	128 11 2	...	
Dera Ismail Khan	641	227 0 1	129 4 2	...	
Muzaffargarh	1,095	450 0 0	150 0 0	...	
Dera Ghazi Khan	2,026	736 15 9	132 12 4	...	
Kohat	365	140 13 3	140 13 3	...	
Montgomery	954	312 9 7	119 9 7	...	
Veterinary College, Lahore ...	214	155 2 10	264 10 8	...	
Babugarh Depôt	1,930	903 3 9	170 13 1	...	
Add charges for gear, &c., purchased	...	2,202 2 8	...	...	
TOTAL ...	62,564	25,610 4 1	...	149 6 6	

BENGAL SECRETARIAT LIBRARY

Statement showing cost of feed, keep, and attendants, &c., of Government Donkey Stallions in the Bengal and Bombay Presidencies during the official year 1892-93—concld.

Presidency, Province, and District.	Number of donkey stallions or days.	Total annual cost.	Average per donkey stallion per annum.	General average in each province.	Remarks.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	
Bombay Presidency.					
Deccan.					
Ahmednagar	797	719 2 2	329 5 5	...	
Poona	109	100 7 3	336 6 0	...	
Total ...	906	819 9 5	...	330 2 11	
Sind.					
Hyderabad...	658	440 13 7	244 8 8	...	
Shikarpur	4,668	3,332 12 7	260 9 6	...	
Jacobabad	2,190	2,173 14 11	362 5 1	...	
Total ...	7,516	5,947 9 1	...	288 13 3	
Baluchistan.					
Quetta	79	71 1 5	264 15 9	...	
Sibi	501	336 3 5	244 15 1	...	
Total ...	580	407 4 10	...	256 5 1	

ABSTRACT.

Presidency.	Province.	Average in each Province.	Average in each Presidency.	Remarks.
		Rs. A. P.	Rs. A. P.	
Bengal ...	North-Western Provinces ...	143 1 8	147 0 6	
	Punjab	149 6 6		
Bombay ...	Deccan	330 2 11	290 14 3	
	Sind	288 13 3		
	Baluchistan	256 5 1		

Section I (Military)—Appendix XIV.

(Referred to in paragraph 8, page 19).

Mule-Breeding.

General statement showing results of the year's operations during the official year 1892-93.

Presidency.	Province.	Mares covered: For mule breeding: During 1891-92.	Mares covered: For mule breeding: During 1892-93	Mares covered: Donkey mares for donkey-breeding: During 1891-92.	Mares covered: Donkey mares for donkey-breeding: During 1892-93.	Number of donkey stallions employed at stud work: During 1891-92.	Number of donkey stallions employed at stud work: During 1892-93.	Average number of mares covered during 1892-93 per stallion employed in that year.	Mule and donkey foals by Government donkey stallions foaled during the year. Total produce. By Spanish (Catalonian)	By Cyprian.	By Arab.	By Persian.	By Punjabi.	By Khorasani	By Italian.	By French.	By Homo-bred.	By Bokhara.	Donkey colts.	Donkey fillies	Abortions.	Total produce.	Not held.	Not known.	Total.	Number of mares covered in 1891-92, the results of which are known.	Number of Government donkey stallions employed in 1891-92, the results of which, as regards coverings, are known.	Percentage of produce foaled during 1892-93 to mares covered in 1891-92.	Average number of produce foaled during 1892-93 per stallion employed in 1891-92.
Bengal	North-Western Provinces	5,046	4,703	123	140	105	99	47 5	103	126	314	173	38	...	644	48	116	..	21	16	...	1,599	..	..	.	4,717	105	33·89	15·22
	Rajputana	18	20	...		2	1	20	.	..	...			.	..	...	.	...	..	...	...	..		...	...	18	2	...	...
	Punjab	11,500	10 043	934	627	171	162	65 86	87	345	418	257	183	...	1,198	111		40	129	160	..	2,928	..	...		10,024	138	29·20	21·21
	Total ...	16,564	14,766	1,057	767	278	262	59·28	190	471	732	430	221		1,782	159	116	40	150	176	.	4,527	.	...	...	14 759	245	30·26	18 23
Bombay	Deccan	1	28	...	...	0·45	1 56	17 9		..		.		..	..	...		...	...	...	..		1	...	1	1	0·45	..	...
	Sind	938	814	...	..	22 13	19 13	42 55	...	4	17	25		4	29	...	..	3	...	.	10	92	517	379	988	609	13·64	15·10	6·7
	Baluchistan	30	4	...	...	0·94	1	4	..	.	...	..		...	3	...			...	...	1	4	19	7	30	23	0·94	17·39	4·25
	Total ...	1,019	846	...		23 52	2 69	39 00	...	4	17	25		4	32	...	...	3	...	...	11	96	537	386	1,019	633	15 03	15·16	6·38

N.B.—In working out averages in the Bombay Presidency, abortions have been taken into account.

Section I (Military)—Appendix XV.

(*Referred to in paragraph 15, page 21.*)

MULE-BREEDING.

No. $\frac{2}{1}\frac{1}{3}$, dated Simla, the 1st June 1893.

From—SIR E. C. BUCK, KT., C.S.I., Secretary to the Government of India, Revenue and Agricultural Department,

To—All Local Governments and Administrations.

In my Circular No. 18-54, dated 25th May 1892, the Government of India invited the co-operation of civil authorities in the promotion of horse-breeding in those parts of India in which favourable conditions exist, and in Circular No. 26-26, dated 14th July 1892, permission was granted to Local Governments to make loans to local bodies and landowners desirous of purchasing and maintaining stallions. I am now directed to address you in the interests of the Military Department on the cognate subject of extending the breeding of mules, and to express the desire of His Excellency the Governor-General in Council that the subject may receive early and careful attention.

2. A considerable advance has been made in recent years in mule-breeding, and the industry is fairly established in districts where it was formerly unknown or little practised. The supply of mules is, however, still far short of the demand, as may be gathered from the high prices asked for the better class of mules, and the fact that large numbers have to be imported from abroad for army purposes. Both in the interests of the public and the State it is of great importance that the indigenous supply of these useful animals should be improved and increased, and that an industry, at once easy and profitable, should be fostered among the agricultural population.

3. For the promotion of mule-breeding the Imperial Government already maintain 300 donkey sires in the provinces comprised in the Bengal Presidency, and have recently decided to increase the number by 100. They have also resolved to increase the grant for prizes for mules exhibited at fairs. These measures will, it is hoped, result in securing a larger production of Indian-bred mules suitable for the army. But for the effective development of the industry, it is essential that they should be liberally supplemented by local and private efforts. The replies to Circular No. 45 of the 22nd August 1887 indicated generally that such aid would not be wanting when the professional supervision and advice necessary for the successful prosecution of breeding was available. This is being gradually provided in every province, and the Government of India request that local Governments will now consider what positive measures may be taken to promote mule-breeding within their respective jurisdictions.

4. I am to suggest that the Superintendent of the provincial Civil Veterinary Department should, in the first instance, be required to prepare, in consultation with the district authorities, and under the direction of the Agricultural Department, a report showing the districts or tracts in the province suitable for the breeding of mules; the number of donkey stallions already available, or which can be made available by the Inspector-General, Civil Veterinary Department, from the Imperial list; the increase, if any, recommended, and the cost of purchasing and maintaining the number of stallions required to make up the strength proposed. When the number of donkey stallions which can be usefully placed in addition to those provided from Imperial funds has been ascertained, it may be considered how far they can be provided from provincial resources with the co-operation of local boards, municipalities, court of ward estates, or large landholders It will probably be found a convenient and economical course to frame an annual indent of all the stallions throughout the province for which funds from whatever source are available, and to arrange through the Inspector-General, Civil Veterinary Department, for their purchase at the same time and through the same agency as the stallions obtained annually by the Government of India.

5. I am further to suggest that district authorities should be invited to promote the measures above advocated by explaining to the people the profits and advantages of mule-breeding. On this subject I am to enclose for information a letter from the Inspector-General, Civil Veterinary Department, No. 35 R. & A., dated 14th May 1890, the circulation of which has been deferred pending the establishment of the Civil Veterinary Department.

6. I am finally to request that the action taken in pursuance of the wishes of the Government of India as communicated in this letter may be noticed in the Annual Veterinary and Agricultural Reports of the province, and to solicit the special consideration of all local Governments and Administrations to the subject as one which is held to be of very serious importance to military interests.

SECTION II.—REVENUE.

Appendices.

Section II (Revenue)--Appendix I.

(Referred to in paragraph 5, page 32.)

Statement showing the number of District Board horse, pony, and donkey stallions present in the Bengal Presidency during the official year 1892-93.

Presidency.	Province.	Number present on 1st April 1892.			Number received during the year.			Total.			Number died.			Number destroyed.			Number sold.			Number remaining on 31st March 1893.			Remarks.
		Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	Horse.	Pony.	Donkey.	
Bengal ...	North-Western Provinces.	2	...	...	3	3	...	5	3	...	...	...	...	...	...	...	1	...	...	4	3	...	
	Punjab ..	17	5	4	5	5	1	22	10	5	1	1	...	...	...	..	...	1	..	21	8	5	

Section II (Revenue)—Appendix II.

(Referred to in paragraph 11, page 33.)

Statement showing the number of unbranded and district branded mares for horse-breeding present in the Bengal Presidency during the official year 1892-93.

Presidency.	Province	Names of districts	Unbranded Mares							District branded mares.							Remarks.
			Number present on 1st April 1892	Number received during the year	Total.	Number sold	Number died	Number stolen	Balance remaining on 31st March 1893.	Number present on 1st April 1892.	Number branded during the year	Total.	Number sold	Number died	Number stolen	Balance remaining on 31st March 1893.	
North-Western Provinces and Oudh.		Etawah	3	7	10	...	...	...	10	31	10	41	4	4	...	33	
		Bareilly	69	16	85	1	1	...	83	9	2	11	.	...	...	11	
		Farukhabad	...	5,693	5,693	...	...	...	5,693	...	..		...	...	...	...	
		Hardoi	..	5,000	5,000	..	...	...	5,000	...	...	...	...	...	..	...	
		Aligarh	...	1,055	1,055	...	...	..	1,055	...	...		...	...	...	...	
		Etah	1,172	169	1 341	123	15	2	1,201	14	4	18	1	...	...	17	
		Shahjehanpur	163	27	190	...	...		190	97	1	98	1	..	..	97	
		Sultanpur	1,067	150	1,217	41	13	...	1,163	13	1	14	...	...	...	14	
		Mirzapur	...	3,251	3,251		...	...	3.251	...	...	...	...	..		...	
		Jaunpur	918	158	1,076	52	31	2	991	..		...	...	...	...	...	
		Agra ...	148	10	158	4	...	...	154	30	1	31	1	...	...	30	
		Meerut	2,879	2,529	5,408	585	184	5	4,634	2,027	108	2,135	6	11	1	2,117	
		Muttra	1,564	281	1,845	88	33	11	1,713	95	70	165	7	1	...	157	
		Saharanpur	92	25	117	1	...	...	116	243	14	257	1	2	...	254	
		Total.	8,075	18,371	26,446	895	277	20	25,254	2,559	211	2,770	21	19	1	2,730	

Bengal ...		Gurgaon ...	1,555	86	1,641	90	18	2	1,531	18	10	28	...	...	...	28
		Delhi ...	986	475	1,461	78	17	...	1,366	...	...	...	...	...	...	...
		Kurnal ..	1,323	200	1,523	50	25	30	1,418	...	...	...	...	...	...	...
		Hissar ..	...	125	125	...	...	...	125	...	...	...	...	...	...	...
		Rohtak ..	931	106	1,037	91	23	3	920	...	...	...	...	...	...	...
		Umballa ..	3,699	314	4,043	238	47	13	3,745	1,574	48	1,622	179	17	3	1,423
		Sialkot ...	2,596	377	2,973	144	76	20	2,733	...	57	57	...	...	...	57
		Shahpur ...	78	34	112	1	...	...	111	4	...	4	...	...	...	4
		Jhang ...	983	95	1,078	62	51	5	960	...	...	...	...	...	...	...
		Ferozepore ..	450	80	530	2	2	...	526	...	50	50	4	3	1	42
		Peshawar ..	85	39	124	12	7	...	105	...	...	...	...	...	...	...
		Multan ..	1,200	40	1,240	...	20	..	1,160	...	...	...	...	...	...	...
		Gujranwala ..	305	6	311	5	12	...	294	...	...	...	...	...	...	...
	Punjab ...	Bannu ...	...	...	...	...	...	...	172	...	...	...	...	...	...	...
		Montgomery ...	2,158	437	2,595	138	89	26	2,342	...	...	...	...	...	...	...
		Hoshiarpur ...	1,500	57	1,557	50	47	60	1,400	...	...	...	...	...	...	...
		Amritsar ..	450	30	480	40	10	5	425	...	...	...	...	...	...	...
		Jullunder ...	1,130	122	1,252	203	19	15	1,015	...	...	...	...	...	...	...
		Ludhiana ..	65	10	75	2	3	...	70	145	...	145	6	2	...	137
		Rawalpindi ..	2,758	362	3,120	223	137	8	2,752	...	...	...	...	...	...	...
		Kohat .	300	40	340	30	15	10	285	...	...	...	...	...	...	...
		Gurdaspur ..	184	...	184	...	...	...	184	...	118	118	...	1	...	117
		Muzaffargarh ...	400	...	400	...	...	...	400	...	...	...	...	...	...	...
		Total ...	23,136	3,065	26,201	1,519	618	197	24,039	1,741	283	2,024	189	23	4	1,808

Section II (Revenue)—Appendix III.

(REFERRED TO IN PARAGRAPH 13, PAGE 33.)

Statement showing the result of the operations in the Bengal Presidency during the official year 1892-93.

Presidency.	Province.	Class	Number of unbranded mares or district branded mares, the property of breeders, remaining on 31st March 1893.	Number of such mares covered by district board stallions		Number of district board stallions employed at stud work		Average number of mares covered in 1892-93 per stallion employed during the year	Number of stock, the property of breeders got by district board stallions during the year 1892-93							Number of mares covered in 1891-92, the results of which are known	Number of district board stallions employed in 1891-92, the results of which, with regard to coverings, are known	Percentage of produce foaled in 1892-93 to mares covered in 1891-92.	Average number of produce foaled during 1892-93 per stallion employed at stud work in 1891-92.	Remarks
									Colts.			Fillies.								
				During 1891-92.	During 1892-93	During 1891-92.	During 1892-93.		Arab	Persian.	Country bred.	Arab.	Persian.	Country-bred.	Grand Total					
Bengal ...	North Western Provinces	Horse	27,984	33	101	2	*4	25 25	2	...	...	2	...	...	4	33	2	12 12	2	
		Pony	...	..	...	..	3	...	...	...	...	...	...	...	...	...	...	...	..	
		Donkey	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	North Punjab .	Horse	1,325	176	347	5	9	88 55	25	...	1	27	...	1	54	176	5	30 63	10 80	
		Pony	3,268	62	78	1	5	15 6	9	...	...	15	...	...	24	62	1	38 70	21 00	
		Donkey	700	...	9	...	1	9 00	...	...	...	...	...	...	...	...	...	...	...	
	South Punjab ...	Horse	7,840	1,267	691	14	14	49 35	100	...	...	96	...	...	196	744	14	26 34	14	
		Pony	2,000	..	...	...	...	...	...	...	..	...	...	...	...	...	...	..	...	
		Donkey	10,626	21	84	3	3	28	3	4	...	3	2	...	12	21	3	57 14	4	

* Two of these horse stallions were only issued in February and March and did hardly any work. No returns of mares covered by these have been received.

Section II (Revenue)—Appendix IV.

(Referred to in paragraph 14, page 33.)

Statement showing cost of feed and keep, &c., of District Board Stallions in the Bengal Presidency during the official year 1892-93.

Presidency, Province, and District.	Class.	Number of stallions or days.	Total annual cost.	Average per stallion per annum.	General average in each Province.	Remarks.
Bengal Presidency.			Rs. A. P.	Rs. A. P.	Rs. A. P.	
N.-W. Provinces.						
Etawah	Horse.	327	222 7 2	250 0 0		
Cawnpore	"	365	319 7 9	319 7 9	285 13 6	
Total ...	..	692	541 14 11	...		
Punjab.						
Ferozepore	Horse.	365	280 8 4	280 8 4		
Peshawar	"	310	297 9 8	350 6 5		
Jhang	"	335	234 13 11	277 11 2		
Shahpur	"	365	273 8 0	273 8 0		
Multan	"	52	36 2 0	253 9 1		
Gurdaspur	"	730	496 0 10	248 0 5		
Muzaffargarh ...	"	730	961 8 8	480 12 4		
Hissar	"	1,095	550 11 6	183 9 2		
Kurnal	"	365	203 4 3	203 4 3		
Delhi	"	1,095	834 13 10	278 4 7		
Gurgaon	"	365	246 7 9	246 7 9		
Umballa	"	1,743	1,219 5 1	255 6 0	273 6 1	
Total ...	...	7,550	5,654 13 10	...		
Shahpur	Pony.	453	292 8 9	217 7 5		
Sialkot	"	133	90 7 3	271 0 0		
Umballa	"	1,214	662 6 11	199 2 0	213 2 9	
Total ...	...	1,790	1,045 6 11	...		
Multan	Donkey.	232	105 1 6	165 5 5		
Hissar	"	365	113 1 6	143 1 6		
Kurnal	"	365	105 15 3	105 15 3		
Delhi	"	730	296 11 10	148 5 11	140 6 6	
Total ...	...	1,692	650 14 1	...		

Section II (Revenue)—Appendix V.

(Referred to in paragraph 29, page 43.)

No. 19-C., dated Meerut, 5th May 1890.

From—INSPECTING VETERINARY SURGEON J. H. B. HALLEN, General Superintendent, Horse Breeding Department,

To—The Chief Secretary to the Government of Madras.

I have the honor to address you as a consequence of my visit to Madras on the last day of February and early in March last, when I had the opportunity of having interviews with His Excellency the Governor and the Hon'ble Members of Council on the subject of inaugurating the Civil Veterinary Department, which has been for some years under the consideration of the Right Hon'ble the Secretary of State for India, who has enjoined the necessity and expediency of the formation of such a Department.

2. I have to record my sense of obligation in respect to His Excellency Lord Connemara, G.C.I.E., and Messrs. Stokes and Garstin, for having so kindly accorded me interviews on the dates noted.

28th February 1890, with the Hon'ble Mr. Stokes and Mr. Garstin.
3rd March 1890, with His Excellency the Governor of Madras

3. The subjects which I brought before His Lordship and the Hon'ble Councillors for consideration were :—

(*a*) The measures necessary for the establishing of a Civil Veterinary Department.

(*b*) The desirability of having a veterinary school and hospital in the metropolis of Madras for the education of native veterinarians to be employed in the coming Civil Veterinary Department.

(*c*) Measures for the repression of cattle plagues which commit havoc, leading to heavy loss to agriculturists, and consequently more or less causing revenue to be not easily yielded to the State.

(*d*) Cattle, pony, and mule-breeding to be fostered and developed.

4. With regard to (*a*), I would submit that the expediency of establishing a Civil Veterinary Department in the Madras Presidency is as necessary as it is being proved in the Punjab satisfactory. The duties of the Department will consist in matters connected with (*b*), (*c*) and (*d*); and in taking these subjects into consideration *seriatim*, I trust my views and suggestions may meet with the approval of His Excellency the Governor of Madras in Council.

5. Referring to (*b*). In order to have a staff of veterinarians of sufficient strength to form a body of practical advisers to district local authorities on the repressing of cattle plagues, it is necessary to have a school for the education of men from the several districts to enable them to become practical cow-doctors, especially with reference to the detection of ordinary cattle plagues of India, and diagnosing of the symptoms evidenced in each kind of plague.

Every district should send men to the veterinary school who have a bent for the care and management of cattle, as unless a student has truly a bent for the work he will not become a practical cow-doctor. Again, it is necessary that each district should provide men to be educated and then returned to their district as practical cow-doctors, because it is well-known that natives of India have as a rule an objection to leave their own districts; indeed, unless they can go in family parties, they object to individually settle in other countries, even neighbouring districts.

These men when educated, and having become certified as practical cow-doctors, may be employed by district boards as veterinary assistants.

6. Having had the opportunity of visiting the Saidapet Agricultural College, to which there is a veterinary hospital attached, where natives have been educated and issued as stock inspectors to the districts, and having observed the very small number of patients in the veterinary hospital, and found it recorded in the report of the Inspector of Cattle Diseases that few cases were

admitted in the hospital during the year, I beg to suggest that if a veterinary school and hospital be established in Madras proper, a larger number of patients might be sent to and received in hospital, and thereby the practical teaching of the students would be conducted on a sounder basis. No student, whether medical or veterinary, can learn to be a sound practitioner unless he has the opportunity of duly walking the wards of a hospital well-filled with patients, and thus rendered able to see disease in its various phases, and to learn how to discriminate between the symptoms of one and another, and to acquire a thorough knowledge of practical medicine and surgery.

7. I trust I may be pardoned for noting my belief that the students issued from the Saidapet Agricultural College and Veterinary Hospital, with its paucity of patients, cannot have acquired that practical knowledge of cattle diseases which a Veterinary Assistant should possess. I would therefore earnestly suggest that His Excellency in Council may be pleased to have a veterinary school and hospital established in the Madras metropolis.

8. The following staff would suffice for the school :—

One European Veterinary Surgeon of the Civil Veterinary Department as Resident Surgeon and Professor of Cattle and Horse Pathology.

One Veterinary Hospital Assistant and Superintendent of the Shoeing Forge.

One Native Lecturer on Anatomy and Physiology.

One Native Lecturer on Chemistry and Materia Medica.

Believing that Mr. Shunker, at present employed under the Madras Government, and considered a worthy and practical man, and, as I have been informed by a Veterinary Surgeon under whom he conducted his duties as Farrier-Major when in a Madras Cavalry Regiment that he was always found a reliable Hospital Superintendent, I can but think he would prove a good Veterinary Hospital Assistant and Superintendent of the Shoeing Forge.

The present Veterinary Assistant in charge of the Saidapet Veterinary Hospital (Mr. Narainrao), having passed through a course of study at the Bombay Veterinary College, would probably be found fit for the position of Teacher of Anatomy and Physiology; and a Lecturer or Assistant Lecturer on Chemistry and Materia Medica of the Madras Medical College would be able to undertake the duties of Teacher of Chemistry, and in due time of Veterinary Materia Medica. Thus the staff of a veterinary school would be easily formed, and on the lines indicated in an inexpensive manner.

9. As I believe there is no Civil Veterinary Surgeon practising in Madras, it may be expected that the Madras public would consider the establishing of a veterinary hospital in which sick and lame domesticated animals might be received and duly treated a boon. Moreover, the sick Government cattle within a certain radius of the hospital buildings might be sent there for treatment, and thus the students would have every chance of seeing and attending to medical and surgical practice.

The Shoeing Forge, conducted on sound principles, would become appreciated by owners of horses in Madras. By having the hospital open to the public, the fees, which should be on a very moderate scale, will contribute to the cost of the school and hospital.

This veterinary school and hospital will be thus for the educating and providing of practical cow-doctors for the districts to act as Veterinary Assistants in the suppressing of ordinary cattle diseases and cattle plagues; they would also have the opportunity, during their pupilage of gaining knowledge regarding the diseases of other animals, and would become useful general practitioners. In the event of the Madras Government finding it advisable to have selected graduates of this school educated up to a higher standard, they might be sent to the Veterinary College at Bombay, and after that, if deemed necessary, for a course of study at the Bacteriological Laboratory at Poona.

10. With regard to (*c*), *viz.*, suppressing of cattle plagues, it is necessary to establish a duly organised Civil Veterinary Department; the head of that Department to be a selected Veterinary Surgeon of the Indian Civil Veterinary Department.

This officer's duties will be to act as Veterinary Sanitary Adviser to the Government of Madras, and under his professional supervision and direction Veterinary Assistants educated at the veterinary school should be employed. These men will be under the orders of the district authorities, and their services available in all matters connected with cattle disease repression.

The number of Veterinary Assistants required will depend on the area of a district and the number of cattle in that district. In the event of cattle plague of any kind breaking out in a district, the local authorities will direct the Veterinary Assistant to enquire and report as to the nature of the plague to the nearest district official. Should the disease be reported of a contagious type, *e.g.*, rinderpest or anthrax, the district official will cause the affected cattle to be isolated pending instructions from the district authorities, and will forward particulars to the head district officer, who will communicate with the head Civil Veterinary Surgeon of the Government; such local measures with regard to quarantine and other directions recommended by the latter officer will then be put in force; and, should it be necessary, the aid of more Veterinary Assistants from other unaffected districts might be obtained, so as to concentrate a strong veterinary staff where repressive measures are in operation.

11. I am aware of the manifold duties the district officers have to perform; but I would, with all deference and earnestness, submit that not the least of the most important duties devolving upon district officers is the adopting of any measures whereby the cattle—especially the plough bullocks of the country—may be preserved in health to till the land from which, it may be said, the greater part of the revenue is yielded.

12. Referring to the proceedings of the Board of Revenue, dated 22nd August 1889, I find it recorded on page 14 that the number of cattle that died from rinderpest and anthrax during the years 1887-88 and 1888-89 was as follows:—

Years.	Died from rinderpest.	Died from anthrax.	Total deaths.	Estimated value at Rs. 5 per head.
				Rs.
1887-88	116,558	34,432	150,990	7,54,950
1888-89	95,795	19,893	115,688	5,78,440

and estimating that each head was worth Rs. 5, the pecuniary loss sustained was Rs. 7,54,950 in 1887-88 and Rs. 5,78,440 in 1888-89; and as the spread of these two very contagious diseases can doubtless be limited under due veterinary supervision and control, the desirability of bringing such measures into action is apparent. Moreover, the ignorance of stock owners regarding the nature and treatment of cattle diseases is so manifest that it is incumbent on the authorities to aid in disseminating a sound knowledge of cattle maladies with the view of owners learning how to co-operate in any preventive and suppressive measures by which plagues can be staved off, or, when existing, their spread may be limited or repressed.

13. Referring to the Cattle Disease Prevention Act II of 1886, I would note my opinion that the provisions of the Act are generally good; but the clause regarding the slaughter, when deemed necessary, of cattle affected with plague is one that should be only acted up to on the urgent request of owners of the affected cattle. My reason for most earnestly urging this very necessary precaution is based on the knowledge that, on account of the religious

objections of Hindus, if the measure of slaughter be once carried out among their cattle, all difficulties, obstructions, and obstacles in the way of concealing the existence of plagues would be most persistently adopted, and thus the wishes of Government would be very practically thwarted.

14. As I have above noted, the Act itself—save that clause—is one which may be carried out with satisfactory results, provided the Civil Veterinary Department staff, as above laid down, be established. In order to bring the Act into play, selected districts, where cattle plagues are generally rife, and where the head district officers are really anxious to do all in their power to prevent their ryots losing their plough oxen, should be the first to be manned with a duly qualified veterinary staff of sufficient strength; and under the professional supervision and direction of the head Civil Veterinary Officer, the practical value of the Act will soon become known and appreciated by the natives.

15. I would here repeat the advisability of providing, as men are qualified, such selected districts first, and having most carefully, judiciously, and practically the Act brought into play. Without a sufficient number of Veterinary Assistants and the head professional direction, the district officers could not expect to have the benefits of the Act realized. In order to carry out the provisions of the Act with regard to isolation of the affected animals and the placing in quarantine the villages in which plague exists, the District Board officials and other reliable native gentlemen and land owners should be empowered to bring the Act into force under the professional advice of the Veterinary Officer. Only on occasions when the orders of such district officials may not be obeyed by owners of affected cattle should the Police Department be asked to intervene.

16. I would here acknowledge that at first difficulties and obstacles will be raised by cattle owners in respect to enforcing isolation and quarantine; but these difficulties will have to be surmounted, and by patient and judicious measures satisfactory results will surely follow. In the Punjab measures similar to those above advocated have been brought into operation in districts where cattle plagues have existed, and suppression of the plague with a minimum amount of loss of stock has been successfully attained. Therefore, I would with all earnestness urge that similar satisfactory results can be arrived at in the Madras districts when they are provided with duly qualified veterinary aid of sufficient strength.

17. Referring to (*d*), it may be accepted that the services of the officers of the Civil Veterinary Department will be of benefit in connection with the improvement of the breeds of horned and pony stock. The advice of the Horse Breeding Department on these subjects has not infrequently been sought by breeders in Northern India with regard to the obtaining of suitable bulls and pony stallions. Moreover, the providing of good rams for flocks has been solicited.

The measures now being adopted with regard to pony-breeding in some of the districts of the Presidency, *i.e.*, providing of good pony stallions for mares and the castrating of common pony colts, will doubtless lead to improvement in pony stock. The three Arab pony stallions I saw at Hosur are of good stamp.

18. With regard to mule-breeding, I am mindful of the fact that the attempt made a few years ago to introduce this industry in the Madras Presidency ended in failure; therefore I am not prepared to suggest that any measures in this direction should be for the present again undertaken in the districts. But in order to let owners of pony mares in the Presidency see that mule-breeding will prove a paying industry, I hope to obtain the co-operation of the Army Remount Department by having farm mares at the Hosur Depôt mated with Italian donkeys.

Doubtless the Madras pony owner has religious objections to allowing his mare to produce a hybrid. Moreover, he does not yet see how to make money by breeding mules; but he, like his brother Hindu in Northern India, will learn to believe in the good of mule-breeding when it is proved to him to be remunerative.

Section II (Revenue)—Appendix VI.

(*Referred to in paragraph 1, page 47½.*)

Extract from the Proceedings of the Government of India, Revenue and Agricultural Department,—No. 26/133, dated 4th July 1893.

Read again the following correspondence regarding the organization of the Civil Veterinary Department in India:—

Government of India Circular No. 80, dated 18th October 1889.

Despatch to Her Majesty's Secretary of State for India, No. 80, dated 21st October 1891.

Despatch to Her Majesty's Secretary of State for India, No. 82, dated 21st October 1891.

Government of India Circular No. 1, dated 8th February 1892.

Despatch from Her Majesty's Secretary of State for India, No. 18, dated 18th February 1892.

Letter to the Government of Madras, No. 976, dated 11th May 1892.

Letter to the Government of Bombay, No. 977, dated 11th May 1892.

Letter to the Government of Bengal, No 978, dated 11th May 1892.

Letter to the Government of the North-Western Provinces and Oudh, No. 979, dated 11th May 1892.

Letter to the Government of the Punjab, No. 980, dated 11th May 1892.

Letter to the Chief Commissioner of Burma, No. 981, dated 11th May 1892.

Letter to the Chief Commissioner of the Central Provinces, No. 982, dated 11th May 1892.

Letter to the Resident at Hyderabad, No. 983, dated 11th May 1892.

Letter to the General Superintendent, Horse-Breeding Department, No. 984, dated 11th May 1892.

Government of India Circular No. 18, dated 25th May 1892.

Despatch to Her Majesty's Secretary of State for India, No. 62, dated 9th August 1892.

Circular to Local Governments, No. 33, dated 27th August 1892.

Circular to Local Governments, No. 43, dated 15th November 1892.

RESOLUTION.

The Civil Veterinary Department has now been established, and every Province with one exception has been supplied by transfer from the Military Department, with its full equipment of officers, in accordance with the scheme notified in Circular No. 80 H. B., &c., dated 18th October 1889. Officers transferred from the Military Department will for the purposes of the Resolution be termed "Civil Veterinary Officers."

The rules regulating the pay, pension, and furlough allowances of civil veterinary officers will be published as soon as they have received the final sanction of Her Majesty's Secretary of State.

In the meanwhile, the following instructions are issued for guidance as to the general duties of the officers of the Department.

2. The Inspector-General of the Civil Veterinary Department will be permitted to correspond direct on purely technical matters with local Governments and Administrations or such officials subordinate to them as they may authorize for this purpose, and to submit to the local Governments for consideration and orders, without reference to the Imperial Government, notes and suggestions on all subjects connected with the Department, except in those cases in which important questions of principle are raised, or in which the sanction of the Government of India is, under the rules of administration, requisite.

3. The duties of the Civil Veterinary Department will be classed under three major heads—

Horse-breeding.
Animal-disease.
Instruction.

Horse-breeding.—This subject was dealt with in Circular No. 18, dated 25th May 1892, shown as an appendix hereto. The present Resolution will deal specially with the two other subjects, 'animal-disease' and 'instruction.'

4. *Animal-disease.*—Under this heading are included all matters relating to the medical treatment of animals suffering from disease, accidents, or other causes; to the prevention and cure of disease in animals; and to the general management of them. The term 'animals' will for the purposes of this Resolution be held to include all animals kept for agricultural or industrial purposes, such as cattle, sheep, goats, horses, mules or camels.

5. The officer to whom in the *Gazette of India*, dated 15th October 1892, the title was accorded of "Superintendent, Bacteriological Survey," has now been gazetted as "Assistant to the Inspector-General." He will superintend the animal-disease branch of the central office, and will, under the control of the Inspector-General, deal with all subjects connected with animal-disease. He will be permitted to place himself in direct communication with Civil Veterinary Officers on technical matters of detail. His main duties will be—

(i) to collect, collate, and circulate information and statistics regarding animal-disease. A circular on the subject is under separate issue;

(ii) to publish from time to time manuals regarding the treatment of animal-disease and cognate subjects;

(iii) to assist the Imperial Bacteriologist in obtaining such special information as he may require regarding the more virulent and contagious diseases, and to procure the assistance of the provincial veterinary officers in supplying him with specimens of virus, tissues of diseased animals, etc.;

(iv) to communicate to provincial officers information regarding the treatment of animals with vaccines, and to instruct them as to any new methods of treatment, which it may be considered desirable to introduce;

(v) to visit, with the permission of Provincial Governments, each province for the purpose of conferring with local veterinary officers regarding the treatment of animal-disease and cognate subjects, and of submitting reports and suggestions in connection with the objects of the Bacteriological Survey and with the treatment of animal-disease for the consideration of the Government of the province;

(vi) to collect, collate, and circulate information regarding the various breeds of cattle and other animals in India, and, if required, to arrange for the supply of stock cattle for breeding farms.

6. The Government of India will allow each local Government and Administration to determine, subject to the following instructions, the duties of the civil veterinary officers attached to the province, and to decide from time to time what measures can be adopted or proposed for the prevention of animal-disease.

7. His Excellency the Governor General in Council as at present advised is disposed to believe that in most provinces it would be premature to attempt to establish any system of dealing with animal-disease which would involve coercion or interference with owners of cattle or other animals. In the hope that for the more virulent and contagious diseases vaccines may be discovered, which can be employed without offending the prejudices of the people, it will, in his opinion, be preferable to await the results of the bacteriological investigations now set on foot, and in the meantime to confine action to distributing information and advice regarding the sanitary or other precautions which the people can take for themselves.

8. The circumstance must not, however, be overlooked that, independently of virulent and contagious epidemics, there are numerous diseases and accidents to which animals are subject, which can be prevented, mitigated, or cured,

by ordinary treatment, and which in themselves afford a large and important field for the operations of the civil veterinary establishments. It is necessary, therefore, that a careful investigation should be made as to the character of all diseases, whether of an epidemic character or not, which occur or are prevalent in each district of the province, as to the method of treating them usually adopted, as to the results obtained from the treatment, and, generally, as to all circumstances connected with the occurrence and present treatment of animal disease. One of the principal duties of the civil veterinary officers of the province will accordingly be to conduct an investigation of the nature described, and to communicate to the Assistant to the Inspector-General such information as that officer may require for the purposes indicated in clauses (i) and (ii) of paragraph 5.

9. In other respects the main duties of veterinary officers in connection with animal-disease will be, under such orders as may be issued by the local Governments, to organize and inspect the subordinate staff; to issue instructions as to the treatment of ordinary diseases; to advise as to the precautions to be taken in the case of contagious diseases; and to submit reports on all matters connected with the treatment of animal-disease.

10. The civil veterinary officers will also be required—

(i) to telegraph the outbreak of any serious epidemic disease to the office of the Inspector-General, Civil Veterinary Department, who will inform his Assistant and the Imperial Bacteriologist, so that, if necessary, one or both of these officers may visit the locality for the purpose of taking observations and examining affected animals;

(ii) to make from time to time, in accordance with the general directions of the Imperial Bacteriologist, such microscopic examinations as without interfering with other duties can be made by them;

(iii) to forward such specimens of tissues, etc., of diseased animals as may be required by the Imperial Bacteriologist.

11. The question of establishments subordinate to civil veterinary officers was alluded to in Government of India Circular No. 80 of the 18th October 1889.

The Government of India are not in a position either to dictate what should be the strength of these establishments, which must vary with the conditions and financial circumstance of each province, or to give definite sanction to any general scheme for subordinate establishments until the views and wishes of local Governments and Administrations have been received. But, as at present advised, the Governor General in Council is of opinion that the aim should be to equip each district in course of time, and, as circumstances permit, with a sufficient number of trained veterinary assistants or inspectors, whose duties will be—

(*a*) to report periodically the occurrence or existence of any animal disease;

(*b*) to make special and immediate reports of outbreaks of serious disease;

(*c*) to advise owners as to the precautionary measures which should be taken for protecting their animals against contagious disease;

(*d*) to control the import and export of diseased animals from or to other provinces or countries;

(*e*) to treat ordinary disease;

(*f*) to advise owners as to the treatment of ordinary disease;

(*g*) to carry out instructions received for the treatment of contagious disease.

A separate circular will be issued on the subject of the grading and qualifying tests recommended for subordinate establishments.

12. The civil veterinary officers should, in the opinion of the Government of India, be made responsible for inspecting and reporting on the work of all veterinary subordinates. In some provinces a plan has been adopted of employing veterinary assistants under the Court of Wards, Municipalities, and District Boards, their salaries being provided from the Wards' estates or from municipal or local funds. His Excellency the Governor-General in Council considers that this system has many advantages; but that it should not be allowed to preclude the provincial veterinary officers from inspecting and reporting on the work of subordinates so employed.

13. *Instruction.*—The Government of India have in their despatch to the Secretary of State, No. 82 of the 21st October 1891, on the organization of the Civil Veterinary Department expressed their desire that for some time to come no attempt should be made to provide high class veterinary instruction in any province except in Bombay and the Punjab, where veterinary colléges have already been established.

There appears to be at present but little opening for native practitioners who have received a high class diploma otherwise than in Government service. The number of men who can be so employed is too small to justify the establishment of an expensive educational institution in every province. The facilities of communication now existing will render it easy for those veterinary students who may wish, or may be required, to obtain a high class diploma to pass their examinations at Lahore or Bombay. A parallel case is that of Forest students who are sent from all provinces in India, except Bombay, to receive instruction at the Dehra Dun Forest School.

14. On the other hand, second class instruction should, in the opinion of the Government of India, be provided in every province of such a character as to fit the subordinate employés of the department for the duties enumerated in paragraph 11. With the permission of local Governments and Administrations, the Inspector-General of the Civil Veterinary Department and his Assistant will in the course of their tours be invited to submit advice and suggestions as to the subjects in which veterinary subordinates require instruction. Provincial veterinary officers should, moreover, be placed in a position in which they can guarantee the qualifications of candidates for employment, on the efficient performance of which the results of their own administration must depend. In other words, the system of instruction should be based upon the advice of the responsible veterinary experts. These questions will be further dealt with in the circular about to issue to which allusion is made in paragraph 11.

15. In connection with the preceding paragraphs, the Government of India desire that a report may be submitted before the 1st January 1894 showing—

(1) The subordinate veterinary establishments as they stood on 1st June 1893, their strength and the pay of each post.

(2) The strength and cost of any other subordinate establishments contemplated.

(3) The duties assigned to establishments, existing or proposed.

(4) The schools existing or contemplated; the strength of the educational staff and the pay of each post.

(5) The system of instruction to be adopted.

(6) The course of instruction adopted or proposed.

16. The Civil Veterinary Department in every province will, under such orders as may be issued by the local Government, be subject to the general control and supervision of the provincial Department of Agriculture, and in the annual report of that department the operations of the Veterinary Department should be briefly noticed.

Section II (Revenue)—Appendix VII.

(Referred to in paragraph 2, page 47.)

Circular No. 27—133, dated Simla, the 4th July 1893.

From—SIR E C BUCK, KT., C S I, Secretary to the Government of India, Revenue and Agricultural Department.

To—The Secretary to the Government of Madras.

" " " " Bombay.

" " " " Bengal.

" " " " the North-Western Provinces and Oudh.

" " " " the Punjab.

" Chief Commissioner of the Central Provinces.

" " " " Burma.

" " " " Ajmere.

" Resident at Hyderabad.

With reference to paragraph 5 of the Government of India's Resolution No. $\frac{40}{133}$, dated 4th instant, on the subject of the duties of Civil Veterinary officers, I am desired to state, for the information of , that, under the instructions of the Government of India, the Assistant to the Inspector-General, Civil Veterinary Department, who will superintend the animal disease branch of the head-quarters office, has been required to prepare a conspectus of the various diseases to which animals in India are subject with a view to the preparation of a complete manual on the subject, together with a series of coloured maps showing the geographical distribution and comparative prevalence of each disease.

2. Diseases will for the purposes of the conspectus be divided under the heads (*a*) ordinary, (*b*) non-ordinary. The essential difference between the two classes is that class (*a*) will include such diseases as are usually amenable to ordinary treatment, and class (*b*) those which are not usually amenable to ordinary treatment.

3. The following are the heads under which information is required :—

(1) Name of disease.

(2) Whether " ordinary " or " non-ordinary."

(3) Vernacular name or names.

(4) Districts in which such vernacular names occur.

(5) Animals subject to the disease.

(6) In the case of all non-ordinary and some ordinary diseases whether—

(*a*) Normally serious (to be coloured red on the map).

(*b*) Occasionally serious (to be coloured green on the map).

(*c*) Not serious (to be coloured yellow on the map).

(*d*) Non-existent (no colour required).

(7) Whether any local peculiarities.

(8) Ordinary method of treatment by natives, names of drugs used, &c.

(9) Other treatment tried or advised.

(10) Results of treatment ascertained.

(11) Any further particulars deserving notice, *e.g.*, whether occurrence of disease confined to certain districts, notable outbreaks in past years, &c.

4. A provisional list of animal diseases understood to occur in India is appended to this Circular. Suggestions for its amendment or modification should be sent by provincial veterinary officers direct to the Assistant to the Inspector-General, who will himself communicate to them the names of those "ordinary" diseases regarding which information under the 6th head is required.

The location of diseases and their classification under the sub-heads (*a*) (*b*), (*c*), and (*d*) of head 6 will be most conveniently shown by colours on district skeleton maps. As soon as colouring of each district map is completed, two copies should be furnished to the Assistant to the Inspector-General.

5. The information called for in paragraph 3 will probably take some time to collect, and can only be submitted by instalments; but action should be taken under paragraph 4 with the least possible delay.

6. The Government of India do not require any reply to this Circular, but desire that the progress made, both in the enquiry and in the supply of information to the Inspector-General's office, may be noticed in the annual report of the Department of Land Records and Agriculture. For all further purposes of the enquiry details should, with the permission of
be arranged in direct correspondence between the Assistant to the Inspector-General and the provincial officers.

LIST OF ANIMAL DISEASES OCCURRING IN INDIA.

The following provisional list of animal diseases believed to occur in India has been drawn up in the office of the Assistant to the Inspector-General, Civil Veterinary Department. The term 'diseases' includes ailments and the results of accidents, &c., requiring medical treatment. A list of surgical operations is appended :—

NON-ORDINARY DISEASES (*i.e., not ordinarily amenable to treatment.*)

Rabies.
Surra.
Charbon.
Charbon symptomatique.
Glanders and Farcy.
Tuberculosis.
Pleuro-pneumonia.
Goat pox.
Sheep pox.
Rinderpest of severe type.
Tetanus.
Contagious pneumonia in horse.

ORDINARY DISEASES (*i.e., ordinarily amenable to treatment.*)

A.—Contagious.

Foot and mouth.
Cow pox.
Horse pox.
Stomatitis pust. cont.
Scabies, varieties.
Actinomycosis.
Strangles.
Influenza.
Contagious foot rot.
Grease.

B.—Non-Contagious.

(*a*) *Affecting Bones.*

Rickets.
Exostosis Phalangeal.
Ostitis and Periostitis.
Caries.
Necrosis
Osteoporosis.
Exostosis Metacarpal.
Exostosis Tarsal.
Naviculaithritis.
Sessamoiditis.

(*b*) *Affecting Alimentary System.*

Aphtha.
Stomatitis.
Glossitis.
Parotitis.
Ptyalism and salivation.
Acute Pharyngeal catarrh.
Inflammation of Œsophagus.
Stricture of Œsophagus.
Spasm of Œsophagus.
Choking.
Vomition.
Indigestion.
Colic.
Gastritis.
Rupture of stomach.
Ulceration of stomach.
Dilatation of stomach.
Hoven.
Impaction of rumen.
Foreign bodies in Reticulum.
Cancer of stomach.
Stomach staggers.
Fardel bound.
Inflammation of 4th stomach.
Constipation.
Diarrhœa.
Dysentery.
Gastro enteritis.
Intestinal obstruction.
Rupture of intestine.
Enteritis.
Peritonitis.
Ascites.
Hydatids (Peritonæum).
Intussusception.
Volvulus.
Ulceration.
Calculi.
Strangulation.
Hæmatemisis.
Hernia.
Rupture of rectum.

(*c*) *Affecting Liver.*

Congestion of liver.
Hepatitis.
Peribepatitis.
Sclerosis of liver.
Fatty degeneration of liver.
Hydatids of liver.
Cancer.
Melanotic deposits.
Lymphoid tumors.
Jaundice.
Abscess of the liver.
Gall stones.

(*d*) *Affecting Spleen.*

Enlargement of spleen.
Lymphadenoma.

Morbid growths.

(*e*) *Affecting Respiratory System.*

Cough.
Grunting.
Whistling.
Roaring.
Catarrh.
Laryngitis.
Bronchitis.
Congestion of lungs.
Pneumonia.
Pleuro-pneumonia.
Asthma.
Broken wind.
Pleurisy.
Hydrothorax.
Empyema.
Emphysema.
Broncho-pneumonia.
Hydatids of lung.
Hæmoptysis.

(*f*) *Affecting Heart and Circulatory Apparatus.*

Pericarditis, traumatic and idiopathic.
Carditis.
Valvular disease.
Endocarditis.
Hypertrophy and Atrophy.
Rupture.
Aneurism.
Embolism.
Thrombosis.
Atheroma.
Phlebitis.
Varicose veins.
Hyperæmia.
Anæmia.
Dropsy.
Degenerations.

(*g*) *Affecting Nervous System.*

Hemiplegia.
Paraplegia.
Coma.
Staggers.
Epilepsy.
Meningitis.
Cerebritis.
Softening of brain.
Tumors on brain.
Cancer.
Melanosis.
Glioma.
Fibroma.
Parasitic growths.
Embolism.
Apoplexy.
Inflammation spinal cord.
Tumors.
Chorea.
Enzootic paraplegia.
Hydatids.
Kamri.
Shivering.
Stringhalt.
Hæmorrhage.
Concussion.
Neuritis.
Megrims.

&c., &c., &c.

(*h*) *Affecting Eye.*

Conjunctivitis.
Ophthalmia.
Amaurosis.
Glaucoma.
Staphyloma.
Cataract.
Worm in eye.
Rupture of eye.
Foreign bodies in eye.
Cancer.
Opacity of Cornea.
Tumors, &c.

(*i*) *Affecting Skin.*

Eczema.
Erythema.
Urticaria.
Warts.
Ecthyma.
Scabies.
Pityriasis.
Maggots.
Ringworm.
Tumors.
Lupus.
Erysipelas.
Ulcers, &c.

(*j*) *Parasitical.*

Fluke in sheep and cattle.
Intestinal worms.
Bronchial filaria of cattle and sheep.
Filaria papillosa.
Œstrus, equi and ovis.
Spiroptera megastoma.
Sclerostomiasis.
Pediculi.
Acari.
Verminous aneurisms.
Other parasites.

(*k*) *Affecting Generative Apparatus.*

Vaginitis.
Metritis.
Retention of fœtal membranes.
Injuries.
Inversion of Uterus.
Rupture of Vagina.
Rupture of Uterus.
Parturient fever.
Parturient apoplexy.
Parturition.
Dystokia, &c.
Mammitis.
Leucorrhœa.
Chapped teats.
Abortion.
Orchitis.
Hydrocele.
Phymosis.
Paraphymosis.

(*l*) *Fevers.*

Bilious fever.
Rheumatic fever.
Catarrhal fever.
Malarial fever.
Typhoid fever.
Typhus fever.
Scarlatina.
&c., &c.

(*m*) *Affecting Urinary System.*

Congestion of kidneys.
Nephritis.
Hydatids.
Cystitis.
Urethritis.
Renal Calculi.
Cystic Calculi.
Urethral Calculi.
Diabetes.
Strangury.
Rupture of bladder.
Incontinence of urine.
Stricture of Urethra.
Gonorrhœa.
Maladie de Coit.
Uræmia.
Albuminuria.
Abscess of kidney.

(*n*) *Affecting Locomotory Apparatus, &c.*

Sprains, muscular.
Sprains, ligamentous.
Sprains, tendinous.
Contusions, various.
Dislocations, various.
Anchylosis.
Carpitis.
Diseases of the joints.
Coronitis.
Villitis.
Laminitis.
Bruised sole.
Corn.
Thrush.
Quittor.
Sandcrack.
Navicularthritis.
Canker.
Punctured foot.
Capped elbow.
Capped hock.
Thoroughpin.
Curb.
False quarter.
Side bones.
Foot rot (in sheep).
Foul in the foot.
Deformed feet.
Wounds, punctured.
Wounds, incised.
Wounds, lacerated.
Wounds, contused.
Wounds, poisoned.
Abscesses, various.
Cysts, various.
Windgalls.

(o) *Miscellaneous.*

Rheumatism.	Scrofula.
Hæmo-albuminuria.	Anasarca.
Anæmia.	Azoturia.
Influenza.	Bursati.
Purpura hæmorrhagica.	Pyæmia.
Cancer.	Septicæmia.
Poisoning.	Lymphangitis.

SURGICAL OPERATIONS.

Castration.	Tracheotomy.
Reduction of Hernia.	Paracentesis Thoracis.
Lithotomy.	Operations on fractures.
Lithotrity.	Operations for sandcrack.
Removal of tumors.	Operations for quittor.
Removal of horns.	Operations for corn.
Neurotomy.	Passing catheter.
Tenotomy.	Passing probang.
Cautery.	Rumenotomy.
Setoning.	Puncture of Rumen.
Rowelling.	Œsophagotomy.
Operation on wounds.	&c., &c.

Section II (Revenue)—Appendix VIII.

(Referred to in paragraph 3, page 47.)

Circular No. 42-17, dated Simla, the 28th October 1893.

From—SIR E. C. BUCK, KT., C.S.I., Secretary to the Government of India, Revenue and Agricultural Department,

To—The Secretary to the Government of Madras.
" " " " Bombay.
" " " " Bengal.
" " " " the North-Western Provinces and Oudh.
" " " " the Punjab.
" Chief Commissioner of the Central Provinces.
" " " Burma.
" " " Ajmere-Merwara.
" Resident at Hyderabad.

Replies having now been received to my Circular Nos. 43-120 of the 15th November 1892, I am directed to forward for guidance a copy of the rules approved by the Government of India for the preparation and submission of annual reports of the Civil Veterinary Department.

2. I am also to send a copy of instructions regarding the explanatory map and of the forms of tables prescribed for use in the annual Imperial report, and to request that the tables accompanying the reports for the year ending 31st March 1894 may be based on these forms. The statistics relate almost entirely to Government animals, but similar returns for animals belonging to local bodies would also be useful, and, if they can be compiled, should be added to the Provincial Reports in the prescribed form of tables.

Rules for the preparation and submission of Annual Reports by the Officers in the Civil Veterinary Department.

1. On the 1st July of every year, each Superintendent of the Civil Veterinary Department will submit a report on the Civil Veterinary Administration of the twelve months ending on the preceding 31st March.

2. The report to be divided into two parts, *viz* :—

I.—IMPERIAL.

(*a*) Military Section.
(*b*) Revenue Section.

II.—PROVINCIAL.

As explained below :—

PART I.—IMPERIAL REPORT.

(*a*) *Military Section.*

I.—Horse-breeding—

(1) Government horse stallions ...	Number present at commencement of year. Number added to registers. Number removed from registers. Number present at close of year. Number at stud work. Number of mares covered. Demand for stallions. Which produce the most suitable stock for the Army.
(2) Remounts, country-bred ...	Number purchased.

II.—Mule-breeding—

(1) Government donkey stallions	Number present at commencement of year. Number added to registers. Number removed from registers. Number present at close of year. Number at stud work. Number of pony and donkey mares covered. Demand for donkey stallions.
(2) Number of mules purchased by Government.	

(*b*) *Revenue Section.*

I.—Horse-breeding—

(1) Government horse stallions ...	Cost of feed and keep.
(2) Branded mares	Number present at commencement of year. Number added to registers. Number removed from registers. Number present at close of year. Number served by Government stallions.
(3) Produce	Number foaled, showing averages to mares covered and per stallion employed.
(4) Castration	Number of colts castrated by Veterinary Assistants and Salutries paid from Imperial Funds.

II.—Mule-breeding—

(1) Government donkey stallions	Cost of feed and keep.
(2) Pony and donkey mares ...	Number served by Government donkey stallions.
(3) Produce	Number of mule stock foaled, showing averages to mares covered and per stallion employed.

III.—Horse Fairs and Shows—

Review on each fair and show held.
Stallions whose produce won prizes.

IV.—Instruction Farm—

(1) Balance sheet of cultivation operations.
(2) Return farm animals.
(3) Casualty roll of animals.
(4) Sale roll of animals.
(5) Technical classes held.
(6) Primers published and distributed.

V.—Bacteriological Laboratory—

(1) Description and quantity of vaccine prepared and distributed
(2) Experiments conducted.
(3) Result of experiments.

VI.—General—

(1) Cost of the Department.
(2) Tour of Officers of the Civil Veterinary Department.
(3) General Remarks.

Part II.—Provincial Report.

I.—Horse-breeding—

(1) Horse and pony stallions belonging to District Boards, &c.

Number present at commencement of year.
Number added to registers.
Number removed from registers.
Number present at close of year.
Number at stud work.
Number of mares covered.
Demand for stallions.
Cost of feed and keep, and how defrayed.

(2) Mares unbranded or branded for district horse-breeding .... Number present at commencement of year.
Number added to registers.
Number removed from registers.
Number present at close of year.
Number covered by district stallions.

(3) Produce ... ... Number foaled, showing averages to mares covered and per district stallion employed.

II.—Mule-breeding:—

(1) Donkey stallions belonging to District Boards, &c ... ... Number present at commencement of year.
Number added to registers.
Number removed from registers.
Number present at close of year.
Number at stud work.
Number of pony and donkey mares covered.
Demand for donkey stallions.
Cost of feed and keep, and how defrayed.

(2) Pony and donkey mares ... Number covered by district donkey stallions.

(3) Produce ... ... Number of mule and donkey stock foaled, showing averages to mares covered and per stallion employed.

III.—Cattle disease investigation and prevention—

(1) Information collected.
(2) Outbreaks during the year.
(3) Treatment, vaccination, &c.

IV.—Cattle-breeding, including cattle fairs and shows—

V.—Veterinary Instruction.

(1) Colleges and schools.
(2) Other institutions.
(3) Dispensaries.
(4) Work done by subordinate establishment.

VI.—Tours of Superintendents—

(1) Districts visited
(2) Shows and fairs attended.
(3) Miles travelled by—
(a) Road.
(b) Rail.
(c) Boat or steamer.

VII.—General—

(1) Provincial cost of Department.
(2) General remarks.

3. The annual Imperial report, both Military and Revenue, will be submitted by Superintendents, Civil Veterinary Department, direct to the Inspector-General, and a copy to the Provincial Government. The Provincial Report direct to the Local Government and a copy to the Inspector-General.

4. Reports in connection with the Bacteriological Laboratory and cattle disease will be submitted by the Imperial Bacteriologist and the Assistant to Inspector-General, Civil Veterinary Department, on the 1st July of each year, direct to the Inspector-General, Civil Veterinary Department, and a copy to the Local Government of the province to which the report refers.

5. Any instructions required as regards the information to be furnished under "Imperial Report, Military Section," will be issued by the Inspector-General, Civil Veterinary Department, under the orders of the Military Department; instructions relating to "Imperial Report, Revenue Section," by the same officer, under the orders of the Revenue and Agricultural Department, and instructions relating to the Provincial Report by the Local Government.

6. Principals of Veterinary Colleges and Schools will submit on the 1st July a separate annual report for the year ending 31st March on the institutions under their charge in such form and through such channels as the Local Government may direct, a copy being forwarded by the Principal at the same time to the Inspector-General, Civil Veterinary Department.

7. When the Superintendent, Civil Veterinary Department, is also Principal of a Veterinary College or School, he may, at the discretion of the local Government, submit his report on the college or school in section V of the Provincial Report.

8. Annual reports should generally be confined to a review of facts and statistics collected during the year, the measures carried out, and the results secured.

9. The Inspector-General, Civil Veterinary Department, may submit to the local Government for consideration and orders any observations or suggestions he may desire to make on the provincial reports, but it will be at the option of the local Government to pass orders on the report at once, or to await the remarks of the Inspector-General. The Inspector-General should submit his remarks or suggestions ordinarily within ten days after receipt of a copy of the Provincial report from the Superintendent, Civil Veterinary Department, or the Principal of a Veterinary College or School.

10. When orders have been passed on the provincial report by the local Government, a copy of the report and of the orders thereon will be forwarded to the Government of India. A copy of the orders will also be sent to the Inspector-General, Civil Veterinary Department, direct.

11. All annual Provincial reports of the Civil Veterinary Department should reach the Government of India by the 1st August.

12. The Inspector-General, Civil Veterinary Department, will submit to the Government of India, not later than the 1st October of each year, a report on horse and mule-breeding with Imperial stallions and on any other veterinary matters directly administered by him. The report will also include the statistical tables and a general review of the provincial reports.

13. A copy of the Inspector-General's annual report and of the orders thereon will be forwarded by the Government of India to all local Governments and Administrations.

Instructions regarding the Map which should accompany the annual Report.

A map should accompany the annual report of the Civil Veterinary Department showing the names and situation of stallions' stands. Under the name of each stand should be noted the number of Government horse, pony, and donkey stallions present at that stand at the end of the year—*e. g.* :—

Bulandshahr
3 H-2 P-3 D.

Will indicate that there were 3 Government horse stallions, 2 pony stallions, and 3 donkey stallions at the Bulandshahr stand at the end of the year.

With regard to Provincial stallions, it will be sufficient to note on the same map across the space demarcating the limits of each district, how many horse, pony, and donkey stallions, the property of District Boards, &c., &c , there are in that district, thus :—

District stallions.
2 H-3 P-1 D.

Across the space showing the outlines or boundaries of, say Rawalpindi District, will indicate that there were 2 horse stallions, 3 pony stallions, and 1 donkey stallion in the whole of that district belonging to local bodies or other private individuals.

The above to be printed in black ink : no other colors to be used on the map—

Tables to accompany the Annual Imperial Report of the Civil Veterinary Department.

I. Return of Government horse, pony, and donkey stallions.
II Casualty Roll of Government horse and pony stallions.
III. Sale Roll of Government horse and pony stallions.
IV. Services and produce of Government horse and pony stallions.
V. Record of stallions which produce the most suitable stock for the Army.
VI. Statement of Remounts purchased.
VII. Casualty Roll of Government donkey stallions.
VIII. Sale Roll of Government donkey stallions.
IX. Services and produce of Government donkey stallions.
X. Statement of mules purchased by Government.
XI. Cost of feed, keep, &c., of Government horse and pony stallions.
XII. Return of branded or certificated mares and their produce.
XIII. Breeders' colts castrated by Veterinary Assistants and salutris paid from Imperial Funds.
XIV. Cost of feed, keep, &c., of Government donkey stallions.
XV. Abstract of particulars regarding each horse fair and show held.
XVI. Statement showing the stallions whose produce won prizes at horse fairs and shows.
XVII. Balance sheet of cultivation operations.
XVIII. Return of Instruction Farm animals.
XIX. Casualty Roll of Instruction Farm animals.
XX. Sale Roll of Instruction Farm animals.
XXI. Cost of the Department Imperial charges.
XXII. Tours of officers of the Department.

N.B.—The same form of returns as prescribed for the Imperial Report might be usefully adopted for the Provincial portion of the report; but their adoption, or otherwise, is left to the discretion and wishes of local Governments.

Section II (Revenue)—Appendix IX.

(Referred to in paragraph 3, page 57.)

North-Western Provinces Instruction Farm.

Balance sheet of the cultivation operations at the Babugarh Instruction Farm (North-Western Provinces) for the year 1892-93.

Dr.

	Rs.	A.	P.	Rs	A	P.
To Stock—						
1. Value of lands, 70 acres, at Rs. 15 6-0 per acre.	1,076	4	0			
2. Value of buildings	160	0	0			
3. „ plant and machinery ...	1,568	0	0			
4. „ Farm animals—	.....					
(a) 10 Farm mares	3,500	0	0			
(b) 2 pony mares	75	0	0			
(c) 7 donkey mares	350	0	0			
(d) 1 „ filly	40	0	0			
(e) 3 „ colts	200	0	0			
(f) 1 mule	100	0	0			
Total ..	7,069	4	0	7,069	4	0

Cr.

	Rs.	A.	P.	Rs.	A	P.
By Stock—						
23 Value of lands (item 1, Dr side) ...	1,076	4	0	1,076	4	0
24. „ buildings (item 2 plus 5)	426	15	0	426	15	0
25. „ plant and machinery (3 plus 8) ..	2,636	0	10	2,636	0	10
26. „ Farm animals (item 4 plus 9)—						
(a) 5 horse stallions	2,535	0	0	2,535	0	0
(b) 10 Farm mares	3,500	0	0	3,500	0	0
(c) 8 pony mares	620	0	0	620	0	0
(d) 7 donkey mares	350	0	0	350	0	0
(e) 1 „ filly	40	0	0	40	0	0
(f) 3 „ colts	200	0	0	200	0	0
(g) 1 mule	100	0	0	100	0	0
Total ...	11,484	3	10	11,484	3	10

To Repairs, additions, &c.—		
5 Additions to buildings ..	266 15 0	
6. Repairs to plant and machinery ...	177 3 0	
7. Purchase and manufacture of new plant and machinery to replace worn out stock.	... ..	
8. Purchase and manufacture of new plant and machinery as an addition to existing stock.	1,068 0 10	
9. Purchase of Farm animals as an addition to existing stock—	.....	
(a) 6 pony mares	545 0 0	
(b) 11 farm stallions	4,945 0 0	
TOTAL ...	7,002 2 10	7,002 2 10
To Establishment—		
10. Extra pay to Veterinary overseer ...	400 0 0	
11 Pay of Blacksmith and his assistant ..	64 0 0	
12. „ Carpenter	40 0 0	
13. „ Mochi	20 0 0	
14. „ Gardener, ploughmen, and syces	203 6 10	
15. Daily labour	920 15 11	
TOTAL ..	1,647 6 9	1,647 6 9

	Outturn.	Cost price		Market price.	
		Rate per rupee.	Amount.	Rate per rupee.	Amount.
By Production—	M. S. C.	M. S. C.	Rs. A. P.	M. S. C.	Rs. A. P.
27. Lucerne	999 24 0	1 22 9	639 1 1	1 0 0	999 9 7
28. Guinea grass	1,486 9 0	3 5 2	475 1 5	2 0 0	743 1 9
29 Impey	410 14 0	4 17 5	92 8 11	2 33 6	144 12 5
30. Dub grass	4,590 15 0	6 10 4	733 10 11	4 0 0	1,147 9 6
31. Carrots, English	24 0 0	1 22 9	15 5 6	1 0 0	24 0 0
32. Green Oats	417 30 0	3 5 2	133 8 8	2 0 0	208 14 0
33. Hay	520 0 0	3 5 2	166 3 7	2 0 0	260 0 0
34, Bedding grass	220 0 0	4 12 0	51 2 4	2 30 0	80 0 0
35. Oat straw	605 0 0	3 5 2	193 6 4	2 0 0	302 8 0
36. Bhoosa (barley)	50 0 0	4 27 10	10 10 6	3 0 0	16 10 8
37. Oats (seed)	287 0 0	0 12 8	917 6 10	0 8 0	1,435 0 0
38. Linseed	5 0 0	0 12 8	15 15 9	0 8 0	25 0 0
39. Barley	62 0 0	0 31 4	79 4 5	0 20 0	124 0 0
40. Gram, country	54 0 0	0 34 6	62 12 3	0 22 0	98 2 10
41. Gram, Kabul	40 0 0	0 23 7	68 3 1	0 15 0	106 10 8
42 Clover, seed	0 10 8	0 0 5	33 9 0	Rs. 5 per seer	52 8 0
43. English carrot seed ...	0 2 8	0 0 5	7 15 10	„ 5 „ „	12 8 0
44. Impey seed	1 20 0	0 3 2	19 2 11	0 2 0	30 0 0
45. Guinea grass seed	0 1 0	0 0 12	1 4 6	0 0 8	2 0 0
TOTAL ...	...	...	3,716 5 10	...	5,812 15 5

To other Charges—		
16. Stationery	49 14 0	
17. Seeds	75 8 6	
18. Feed and keep of Farm animals ...	1,227 9 4	
TOTAL ...	1,352 15 10	1,352 15 10
To Interest charges—		
19. Interest at Rs. 4 per cent. on outlay (items 2, 3 and 4).	159 13 0	
20. Interest at Rs. 4 per cent. on working capital (½ of items 5 to 18).	53 5 6	
21. Probable rent of land under cultivation if leased out	490 0 0	
TOTAL ...	703 2 6	703 2 6
GRAND TOTAL ...	.....	17,774 15 11
22 Balance profit	.....	2,096 9 7

By Sundries—			
46. Production of young stock—			
(a) Mule	80 0 0	...	80 0 0
(b) Pony colt	20 0 0	...	20 0 0
47. Sale of six Farm stallions...	2,410 0 0	...	2,410 0 0
48. „ Lucerne	39 15 0	...	39 15 0
49. „ Green oats	21 5 9	...	21 5 9
50. „ Dub grass	3 1 6	...	3 1 6
TOTAL	2,574 6 3	...	2,574 6 3
GRAND TOTAL	17,774 15 11	...	17,774 9 6

Note.—(1) Interest on the outlay and working capital has been charged for eight months only, and the rent of land for the whole year.
(2) The 10 brood mares have been shown among the old stock, as they were handed over by the Remount Department without payment
(3) Of the 11 Farm stallions purchased for Rs 4,945, six were sold for Rs 2,410, leaving on hand only five.
(4) The Instruction Farm has lost Rs. 606-13-8 by the sale of the six Farm stallions at the prices paid for them at Bombay, plus Rs. 75 railway freight. The keep of the animals while in Depôt was not charged, hence the loss.

Section II (Revenue)—Appendix X.

(Referred to in paragraph 3, page 57.)

PUNJAB INSTRUCTION FARM.

Balance Sheet of the cultivation operations of the Civil Veterinary Department, Punjab, for the year 1892-93.

(The second column on the Dr. and Cr. sides shows the financial position of the Farm compared with market rates)

August 1892 to March 1893.

Dr. (A) **Cr.** (B)

	Rs. A. P.	Rs A. P.		Rs. A. P.	Rs A. P.
To Stock—			*By Stock—*		
1. Value of 90-8-3 = 56½ acres, at Rs 15-6-0 per acre	868 11 0		1. Value of land (items 1 and 6 A Dr. side) ..	868 11 0	868 11 0
2. Value of buildings	90 0 0		2. Do buildings (items 2 and 6 B side) ...	240 0 0	240 0 0
3. Do. plant and machinery .	813 8 0		3 Do. plant and machinery (items 3 and 9) ...	1,493 11 3	1,493 11 3
4. Do Farm animals—			4. Do. Farm animals—		
10 horse mares, at Rs. 350 each ...	3,500 0 0		10 horse mares	3,500 0 0	3,500 0 0
2 pony mares, at Rs. 10 „ ...	20 0 0		8 pony mares	575 0 0	575 0 0
6 donkey mares, at Rs. 40 „ ...	240 0 0		6 donkey mares	240 0 0	240 0 0
1 mule, at Rs 200	200 0 0		1 mule filly	200 0 0	200 0 0
1 pony filly, at Rs. 30 ...	30 0 0		1 pony filly	30 0 0	30 0 0
3 donkey colts—1 at Rs. 120, and 2 at Rs. 80	200 0 0	5,962 3 0	3 donkey colts	200 0 0	200 0 0
			TOTAL ...	7,347 6 3	7,347 6 3

	Rs. A. P.	Rs. A. P.
To Repairs and additions, &c.—		
5. Repairs to buildings	.....	
6. Additions to land (A)	.. ...	
Do. buildings (B) ...	150 0 0	
7. Repairs of plant and machinery ...	352 12 1	
8. Purchase of new plant and machinery to replace worn out stock ...	.....	
9. Purchase of new plant and machinery as additions to existing stock.	104 9 0 575 10 3	
10. New plants manufactured at the farm to replace worn out stock ...	... .	
11. Purchase of Farm animals in replacement of stock died, cast, &c., &c. ...	.....	
12. Purchase of Farm animals as an addition to existing stock (6) ...	555 0 0	1,737 15 4
To Establishment—		
13. Allowance to Veterinary overseer (Rs. 50 per mensem).	400 0 0	
14. Pay of Farm establishment ...	564 9 5	964 9 5

Articles.	Outturn.	Actual price.		Market price.	
		Actual cost per Re	Amount	Market rate per Re.	Amount.
	M. S. C	M. S. C.	Rs. A. P	M. S. C.	Rs. A. P.
By Production—					
5 Lucerne	648 14 0	1 4 1½	538 0 1	1 0 0	648 5 7
6 Guinea grass	533 25 0	2 8 3¼	241 15 8	2 0 0	266 13 0
7. Dub grass	300 4 0	3 12 5	90 11 7	3 0 0	100 0 6
8. Carrots	122 39 0	1 4 1½	111 8 5	1 0 0	122 15 7
9. Hay	1,296 17 0	2 8 3¼	587 14 1	2 0 0	648 3 4
10. Oats (seed)	109 0 0	0 8 13	494 4 5	0 8 0	545 0 0
11. Oats, straw	225 0 0	2 8 3	102 0 8	2 0 0	112 8 0
12. Mustard (rai)	0 17 0	0 13 4¼	1 4 6	0 12 0	1 6 8
13 Carrot seed	0 2 0	0 1 1½	1 13 0	0 1 0	2 0 0
TOTAL ...	...	...	2,219 8 5	...	2,447 4 8

Punjab Instruction Farm.

Balance Sheet of the cultivation operations of the Civil Veterinary Department, Punjab, for the year 1892-93—coneld.

(The second column on the Dr. and Cr. sides shows the financial position of the Farm compared with market rates)

August 1892 to March 1893.

Dr.	(A)		Cr.	(B)				
To other Charges—			*By Sundries—*					
15. Irrigation and sowing rent ..	.....	.....	14. Sale of lucerne	10 21 0	...	10 8 3	...	10 8 3
16. Manure	.....	.....						
17 Seeds	24 4 9	.....						
18 Feed of Farm animals	329 7 2	353 11 11						
To indirect charges—								
19. Interest at 4 per cent. on outlay (items 2, 3 and 4)	135 13 3	.....						
20. Interest on working capital ($\frac{1}{5}$ of items to 18)	16 4 8	.....						
21. Probable rent of land under cultivation if leased out at Rs. 4-8-0 per pucca bigha	406 13 4	558 15 3						
TOTAL ...	....	9,577 6 11						
22. Savings	.....	227 12 4						
			GRAND TOTAL ...	...	...	9,577 6 11	...	...
GRAND TOTAL ...	.....	9,805 3 3	GRAND TOTAL ..	...	...	...	...	9,805 3 3

Section II (Revenue)—Appendix XI.

(Referred to in paragraph 3, page 57.)

North-Western Provinces Instruction Farm.

Statement showing the quantity per acre and kind of manure used for each description of crop grown; also the total cost of cultivation, the outturn and value of the same in the North-Western Provinces Instruction Farm.

Crops.	Number of acres.	Description and quantity of manure per acre.	Total quantity of manure.	Cost of cultivation per acre.	Total cost of cultivation.	Yield per acre.	Total yield.	Value of cost per acre.	Total value.	Amount of profit or loss.	Profit or loss.	Remarks.
		Tons. cwt. qr. lbs.	Tons. cwt. qr. lbs.	Rs. A. P.	Rs. A. P.	Tons. cwt. qr. lbs.	Tons. cwt. qr. lbs.	Rs. A. P.	Rs. A. P.	Rs. A. P.		
Lucerne	4	25 0 0 0	100 0 0 0	159 12 3	639 1 1	8 18 2 0	35 13 3 16	249 14 4	999 9 7	36 0 8	Profit.	
Guinea grass	1¾	28 11 3 0	50 0 0 0	271 7 8	475 1 5	30 6 2 0	53 1 2 10	424 10 0	743 1 9	268 0 4	Do.	
Guinea seed	...	.....	.....	0 11 9	1 4 6	0 0 0 15	0 0 0 2	1 2 3	2 0 0	0 11 6	Do.	
Impey	1½	7 3 1 0	10 14 1 0	61 11 3	92 8 11	9 15 2 23	14 13 0 0	96 8 3	144 12 5	52 3 6	Do.	
Impey seed	...	.....	.....	12 12 7	19 2 11	0 0 2 24	0 0 5 12	20 0 0	30 0 0	10 13 1	Do.	
Carrots	¾	21 8 2 0	16 4 4 0	20 7 4	15 5 6	1 2 3 12	0 17 0 16	32 0 0	24 0 0	8 10 6	Do.	
Carrots' seed	...	.....	.....	9 15 9	7 15 10	0 0 0 6½	0 0 0 5	16 10 1	12 8 0	4 8 2	Do.	
Dub grass	22	21 8 2 0	502 17 0 0	33 5 7	733 10 11	7 9 0 0	163 18 2 0	52 2 7	1,147 9 6	413 14 7	Do.	
Hay	5	*Nil*	*Nil*	33 3 11	166 3 7	3 13 15 0	18 11 2 0	52 0 0	260 0 0	93 12 5	Do.	
Oats in straw. Oat seed 287 maunds and oat straw 605 maunds.	10½	21 8 2 0	240 0 0 0	105 12 8	1,110 13 2	3 0 2 24	31 17 1 0	165 7 7	1,737 8 0	626 10 10	Do.	
Green oats	2	21 8 2 0	45 14 1 0	66 12 4	133 8 8	7 9 0 0	14 18 2 0	104 7 0	208 14 0	75 5 4	Do.	
Linseed	¾	21 8 2 0	15 4 1 0	23 15 7	15 15 9	0 5 1 12	0 3 2 8	37 8 0	25 0 0	9 0 3	Do.	
Barley	2	21 8 2 0	45 14 1 0	39 10 2	79 4 5	1 2 0 16	2 4 1 4	62 0 0	124 0 0	44 11 7	Do.	
Bhoosa	...	.....	.....	5 5 3	10 10 6	0 17 3 12	1 15 2 24	8 5 4	16 10 8	6 0 2	Do.	
Gram	7¼	21 8 2 0	166 14 1 0	18 0 0	130 15 4	0 9 1 0	3 7 0 16	28 4 1	204 13 6	73 14 2	Do.	
Clover seed	¼	25 0 0 0	6 5 0 0	134 4 0	33 9 0	0 0 3 0	0 0 0 21	210 0 0	52 8 0	18 15 0	Do.	
Bedding grass	8½	*Nil*	*Nil*	6 0 0	51 2 4	0 18 2 0	7 17 0 16	9 6 6	80 0 0	28 13 8	Do.	
		.....	.....	...	3,716 5 10	.....	.....	...	5,812 15 5	2,096 9 7	Profit.	

Section II (Revenue)—Appendix XII.

(Referred to in paragraph 3, page 57.)

PUNJAB INSTRUCTION FARM

Statement showing the area of land under cultivation, the quantity and description of manure used for each crop during the official year 1892-93.

Crops.	Area of land under cultivation.	Quantity of stable manure per acre.		Number of times manured during the year	Total quantity of manure		Yield per acre		Total yield.		Rate per maund		Value per acre.	Total value.	Cost of cultivation per acre.	Total cost during the year	Profit or loss	Remarks
	Acres.	Tons.	lbs		Tons	lbs	Tons	lbs.	Tons.	lbs.	lbs	oz.	Rs A. P	Rs A. P.	Rs. A. P.	Rs A P.	Rs A. P.	
Lucerne ...	2	18	680	3 times	109	1,840	12	133	24	266	82	0	329 7 0	658 14 0	125 0 0	250 0 0	408 14 0	
Guinea grass ...	1	21	2,160	3 „	65	2,000	19	1,196	19	1,196	164	0	266 13 0	266 13 0	100 0 0	100 0 0	166 13 0	
Dub grass ...	3	5	1,110	Once	16	1,060	3	1,482	10	2,206	246	0	33 5 4	100 0 0	83 5 4	250 0 0	150 0 0	Loss.
Carrots ..	½	7	720	Once ...	3	1,480	9	7	4	1,123	82	0	245 15 2	122 15 7	136 0 0	68 0 0	54 15 7	
Hay ...	43	...	...		...	...	1	232	47	1,016	164	0	15 1 2	648 3 4	5 13 0	250 0 0	398 3 4	
Oats	4	..	...	...	...	...	...	2,234	3	2,216	16	0	136 4 0	545 0 0	100 0 0	400 0 0	257 8 0	
Oat straw		...	...	...	...	...	2	132	8	528	164	0	28 2 0	112 8 0				
													TOTAL ...	2,454 5 11	...	1,318 0 0	1,136 5 11	

Section II (Revenue)—Appendix XIII.

(Referred to in paragraph 6, page 57.)

North-Western Provinces Instruction Farm.

Statement showing the amount sanctioned and the expenditure incurred at the North-Western Provinces Instruction Farm during the year 1892-93.

Months, &c.	Sinking pucca wells.	Harness for carts, plough, &c.	Agricultural implements.	Pumps, Persian wheels, churns, &c.	Sheds for stabling and over wells.	Ordinary carts, water carts, &c.	Extra pay to Veterinary Overseer.	Wages of ploughmen, mullis, coolies, and Syces, &c.	Wages of Blacksmith.	Wages of Assistant Blacksmith.	Wages of Carpenter.	Wages of Moohi.	Contingencies.	Total.
	Rs. A. P	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Sanctioned grant ..	1,800 0 0	200 0 0	150 0 0	750 0 0	150 0 0	250 0 0	400 0 0	720 0 0	80 0 0	50 0 0	80 0 0	80 0 0	1,240 0 0	5,950 0 0
Expenditure.														
August 1892 ...	...	9 2 11	10 9 4	...	...	...	50 0 0	...	...	...	...	...	117 7 5	187 3 8
September 1892 ...	...	5 7 4	0 15 0	...	...	...	50 0 0	...	...	...	...	...	205 0 10	261 7 2
October 1892 ...	...	...	...	..	...	...	50 0 0	...	...	...	...	...	233 1 6	283 1 6
November 1892 ...	...	14 8 10	...	22 0 0	...	...	50 0 0	...	...	...	...	...	289 3 11	375 12 9
December 1892 ...	...	15 9 6	7 4 0	536 0 0	...	105 0 0	50 0 0	17 0 0	10 0 0	6 0 0	10 0 0	...	524 0 7	1,280 14 1
January 1893 ...	...	23 6 9	19 11 8	49 7 0	...	...	50 0 0	17 0 0	10 0 0	6 0 0	10 0 0	...	295 9 1	481 2 6
February 1893 ...	...	31 8 8	59 7 0	17 5 7	...	...	50 0 0	81 6 10	10 0 0	6 0 0	10 0 0	10 0 0	253 9 1	529 5 2
March 1893 ...	...	9 11 0	4 14 0	57 4 3	266 15 0	68 12 0	50 0 0	87 0 0	10 0 0	6 0 0	10 0 0	10 0 0	482 14 4	1,063 6 7
Total expenditure ...	...	109 7 0	102 13 0	682 0 10	266 15 0	173 12 0	400 0 0	202 6 10	40 0 0	24 0 0	40 0 0	20 0 0	2,400 14 9	4,462 5 5
Unexpended balance ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,487 10 7

Section II (Revenue)—Appendix XIV.

(Referred to in paragraph 6, page 57.)

PUNJAB INSTRUCTION FARM.

Abstract of expenditure during 1892-93.

Headings.	Amount sanctioned.			Amount expended.			Unexpended balance		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Sinking wells	1,800	0	0	...			1,800	0	0
Harness for cart, &c.	200	0	0	71	0	0	129	0	0
Agricultural implements	150	0	0	65	8	7	84	7	5
Pumps, Persian wheels, &c.	750	0	0	607	2	10	142	13	2
Sheds, stabling, &c.	150	0	0	150	0	0	...		
Carts and water carts	250	0	0	8	11	0	241	5	0
Allowance to overseer	400	0	0	400	0	0	...		
Wages, ploughmen, &c.	720	0	0	445	14	2	274	1	10
„ Blacksmith	80	0	0	30	0	0	50	0	0
„ Assistant Blacksmith ...	50	0	0	15	0	0	35	0	0
„ Carpenter	80	0	0	30	0	0	50	0	0
„ Mochi	80	0	0	...			80	0	0
Contingencies	1,240	0	0	708	15	8	531	0	4
Total unexpended balance							3,417	11	9

Section II (Revenue)—Appendix XV.

(*Referred to in paragraph 9, page 57*)

NORTH-WESTERN PROVINCES INSTRUCTION FARM.

Statement showing the number of Farm stallions purchased and sold, &c., during the year 1892-93.

Serial No.	Name and Breed of Stallion.		Whence, and when received.		By whom, and when purchased.		Prices paid at Bombay (railway freight included).	Prices realized.	REMARKS.
							Rs.	Rs.	
1	White stockings ...	Arab ...	Muttra ...	21st October 1892	District Board, Aligarh ...	27th January 1893	250	250	
2	Kabútar ...	Do. ...	Bombay ...	23rd November 1892.	Ditto ditto ...	28th February 1893.	592	592	Aligarh.
3	Fakhta ...	Persian ...	Ditto ...	8th December 1892.	North-Western Provinces Government.	24th February 1893.	492	492	Bulandshahr.
4	Bhut-titar ...	Arab ...	Ditto ...	8th December 1892	Ditto ditto ...	11th March 1893	392	392	Aligarh.
5	Chikara ...	Do. ...	Ditto ...	8th December 1892.	Ditto ditto .	11th March 1893	342	342	Ditto.
6	Tilour ...	Persian ...	Ditto ...	8th December 1892.	Ditto ditto ...	27th February 1893.	342	342	Meerut.
7	Paimana ...	Arab ...	Ditto ...	8th March 1893	.....	.....	517	...	Present on 1st April 1893.
8	Khayanat ...	Do. ...	Ditto ...	8th March 1893	.....	.....	542	...	Ditto ditto.
9	Dayanat ...	Do. ...	Ditto ...	8th March 1893	.....	.....	542	...	Ditto ditto.
10	Phuljhari ...	Do. ...	Ditto ...	8th March 1893	.....	.....	442	...	Ditto ditto.
11	Chamkila ...	Do. ...	Ditto ...	8th March 1893	.....	.....	492	...	Ditto ditto.

Section II (Revenue)—Appendix XVI.

(Referred to in paragraph 9, page 57.)

PUNJAB INSTRUCTION FARM.

Punjab Instruction Farm stallions during the year 1892-93.

Brand No	Name of Stallion.	Breed.	Color.	Age.	Height.		Girth.	Shank.	Price.	REMARKS.
				Years	H.	I.	I.	I.	Rs.	
2295	Chogud	Arab ...	Dark chestnut . .	4	14	1¾	...	...	417	Sold to North-Western Provinces Government.
2396	Jadid	Do. ...	Bay ...	3	14	1	...	...	292	
2400	Bharkila	Do ...	Grey ...	6	14	2	...	...	417	
2401	Gobrila	Do. ...	Chestnut ...	7	14	1¾	...	...	417	
2403	Pakowri	Do. ...	Dark bay ...	4	13	3	...	...	400	
									1,943	

Section II (Revenue)—Appendix XVII.

(*Referred to in paragraph 25, page 58.*)

BABUGARH HORSE-BREEDING DEPÔT FARM.

(4 miles from Hapur and 24 miles from Meerut Cantonment Railway Station.)

Programme of the Midsummer Class of Technical Instructions from 8th to 15th of August 1892.

The following subjects will be considered, and lectures delivered on—

Stable mangement.—By Inspecting Veterinary Surgeon J. H. B. Hallen.

Management of Stud stallions, brood-mares, and young stock, including their utilization for agricultural purposes.—By Veterinary Captain G. J. R. Rayment.

Forage crop cultivation, viz., lucerne, guinea-grass, dub, carrots, &c.—By Messrs. E. Burke and H. C. D'Silva, Veterinary Overseers.

Lectures on the first two subjects will be given in the stables and paddocks, and those in connection with forage crop cultivation will be carried out in the fields on the farm; thus practical demonstration on each subject will be afforded.

J. H. B. HALLEN,

Inspector-General, Civil Veterinary Department.

Section II (Revenue)—Appendix XVIII.

(Referred to in paragraph 25, page 58.)

Attendance Roll of Students at the Technical Class (Midsummer) from 8th to 15th August 1892.

No.	Name.	Occupation.	Residence.	
			Village.	District.
1	Mr. N. N. Banerjee	Assistant Director, Land Record and Agriculture, Bengal.	Howrah	Calcutta.
2	Mr. Nicholl	Secretary, Municipal Board ...	Amritsar	Amritsar.
3	Ismail Khan	Resaldar, 15th Bengal Cavalry ...	Dhab	Bannu.
4	Ahmed Khan	Duffadar ditto ...	Dera Ismail Khan ...	Dera Ismail Khan.
5	Mohamed Khan	Sowar ditto ...	Koka Jamga ...	Ditto.
6	Ghulam Ali Khan	Ditto ditto ...	Langar Kot	Jhang.
7	Bakshan Khan	Duffadar, 11th Bengal Cavalry ...	Jamali ...	Shahpur.
8	Narain Singh	Sowar ditto ...	Burj	Amritsar.
9	Dost Mohamed Khan ...	Duffadar, 4th Bengal Cavalry ...	Gadari	Jhelum.
10	Lekhram	Sowar ditto ...	Chooli	Hissar.
11	Rameshar Dut Singh	Captain, Balrampur Estate ...	Surjasingh-ka-Deh ...	Gonda.
12	Daud Khan	Veterinary Assistant, Balrampur Estate.	Ulwar	Ulwar.
13	Lal Mohamed	Gardener ditto ...	Ditto	Ditto.
14	Shah Mohamed	Veterinary Assistant, Sonepat ...	Shekupur	Gujranwala.
15	Yakub Khan	Zilladar and Salutri, Muzaffargarh	Jhelum	Jhelum.
16	Chowdri Ghasitoo	President, District Board ...	Jandgala	Sialkot.
17	Ilam Din	Veterinary Assistant, Sialkot ...	Kotli Hajipur	Ditto.
18	Nabi Baksh	Ditto ditto ...	Kandal Sujan ...	Ditto.
19	Nasiruddin	Zaildar	Bagh Kalali	Delhi.
20	Harbunse Singh	Member, Local Board, Delhi ...	Baharpur	Ditto.
21	Balkishen Das	Jailor, Sirmur, Nahan Estate ...	Buria	Amballa.
22	Birj Mohan Singh	Rais, ditto ditto ...	Nahan	Simla.
23	Fazal Din	Veterinary Assistant, Lahore ...	Bagwanpur	Lahore.
24	Ganda Singh	Ditto Amritsar ...	Batala	Gurdaspur.
25	Hakikat Rai	Ditto Hissar ...	Gurdaspur	Ditto.
26	Shib Ram	Ditto Hansi ...	Ram Mangal ...	Hoshiarpur.
27	Fazal-Haq	Ditto Gurdaspur ...	Dharamkot	Gurdaspur.

Section II (Revenue)—Appendix XVIII—*contd.*

(Referred to in paragraph 25, page 58.)

Attendance Roll of Students at the Technical Class (Midsummer), from 8th to 15th August 1892.

No.	Name.	Occupation.	Residence.	
			Village.	District.
28	Sardar Narain Singh	Zaildar and Member	Singhpur	Gurdaspur.
29	Ahmed Baksh	Veterinary Assistant, Kalra Estate	Kot Mian Sahib ...	Ditto.
30	Zahid Khan	Daroga, ditto ...	Kalra	Shahpur.
31	Muzaffar Khan	Ditto ditto ...	Ditto	Ditto.
32	Sipehdar Khan	Safed Posh and Member ...	Ghiar	Kurnal.
33	Rukanudin	Zaildar and Member	Jalmana	Ditto.
34	Hera	Ditto ditto	Barsaloo	Ditto.
35	Hardan	Ditto ditto	Amin	Ditto.
36	Sawab Ali	Lambardar and Member ...	Asand	Ditto.
37	Sardar Chanda Singh ...	Member, District Board ...	Amritsar	Amritsar.
38	Karam Bux	Jemadar, ditto ...	Ditto	Ditto.
39	Mr. F. E. Collis	Assistant Secretary	Amballa	Amballa.
40	Sita Ram	Superintendent, Vernacular Office	Ditto	Ditto.
41	Bholoo	Member, Local Board ...	Naraina	Kurnal.
42	Hardey Ram	Member and Lambardar ...	Manana	Ditto.
43	Udmi	Member, District Board ...	Ahar	Ditto.
44	Buxee	Zaildar	Keorak	Ditto.
45	Hafizullah	Rider, Civil Veterinary Department	Hapur Depôt Bazar ...	Babugarh.
46	Ali Newaz	Naib Resaldar	Maler Kotla Estate ...	Ludhiana.
47	Mirza Jamil Beg	Commandant, Artillery ...	Ditto ...	Ditto.
48	Lakha Singh	Safed Posh	Ditto ...	Ditto.
49	Ghulam Kadir	Head Salutri, Civil Veterinary Department.	Kasur	Lahore.
50	Kifayatullah	Munsarim Karkhanezat, Kalsia State.	Shahabad	Amballa.
51	Tahal Singh	Zaildar	Chachrowli	Ditto.
52	Lala Kotu Ram	Veterinary Assistant	Ferozepore	Ferozepore.
53	Ismail Khan	Sowar	Jamali	Shahpur.
54	Mir Abdulla Khan	Ditto	Kandahar	Kandahar.

Section II (Revenue)—Appendix XIX.

(*Referred to in paragraph 25, page 58*)

CIVIL VETERINARY DEPARTMENT.

BABUGARH HORSE-BREEDING DEPÔT FARM.

(4 miles from Hapur and 24 miles from Meerut Cantonment Railway Station.)

Programme of the Winter class of Technical Instructions from 24th December 1892 to 1st January 1893.

The following subjects will be considered, and lectures will be delivered on :—

(*a*) Stable management	By Veterinary Lieutenant-Colonel J. H. B. Hallen.
(*b*) Management of stud stallions, brood mares, and young stock, and the system of utilising them for agricultural purposes.	By Veterinary Captain G. J. R. Rayment.
(*c*) Forage crop cultivation. Lectures on lucerne, guinea grass, impey, dub, carrots, oats, barley, &c, cultivation in the several fields. The cultivation is carried out yielding good profits.	By Messrs. E. Burke and H. C. D'Silva, Veterinary Overseers.
(*d*) Irrigation by horses (horses and mares), mule and donkey (male and female) power, and to breed from the horse and donkey mares, and have profit by the young stock The irrigation of the cultivated lands of the Civil Veterinary Department depôt will be seen practically carried out by horse and donkey power only. No bullock is employed.	

2. Lectures on the first two subjects will be given in the stables and paddocks, and those in connection with forage crop cultivation will be carried out in the fields on the farm; thus practical demonstration on each subject will be afforded.

3. Men desirous of receiving practical instruction in ploughing, ridging, harrowing, manuring, water-lifting, and the sowing and cultivating of crops may remain at the Civil Veterinary Department Depôt Farm at Babugarh until they prove themselves efficient in all branches of forage crop cultivation. Every student thus remaining for practical instruction will in due course be examined with regard to the several kinds of work carried out on the farm, and on his passing a practical examination in the several subjects, he will receive a certificate on which will be recorded his merits as forage crop workman and cultivator.

Section II (Revenue)—Appendix XX.

(Referred to in paragraph 25, page 58.)

Muster Roll of men attending the Technical Class at the Babugarh Depôt from the 24th to 31st December 1892.

Number	Name	Occupation	Residence	
			Village.	Districts.
1	Dewan Dewar Mall	Manager, Kalra State, Shahpur.	Bhera ...	Shahpur
2	Ahmed Baksh	Veterinary Assistant, Kalra	Dakipur ...	Gurdaspur.
3	Raja Sher Mahomed	Moharrir, Kalra .	Kotha ..	Shahpur.
4	Karam Din	Rider, do ...	Bhera ..	Ditto
5	Nawab Khan	Veterinary Assistant, Bhera	Pheerook ...	Ditto
6	Ahmed Din	Ditto Khushab	Khushab ..	Ditto.
7	Munshi Bhagwandas	Naib Tahsildar, Gohana, Rohtak	Turangla ...	Gurdaspur.
8	Dindial	Field Kanungo, Jhajar ..	Jhajar ...	Rohtak.
9	Luchman Singh	Do Sampla, Rohtak ..	Botala .	Amritsar.
10	Manichand	Do. Rohtak Tehsil ..	Birdhana .	Rohtak.
11	Nanak Singh	Sowar, 4th Bengal Cavalry, Cawnpore.	Nekpur ..	Moradabad.
12	Amir Khan	Sowar, 4th Bengal Cavalry, Cawnpore	Kant ...	Shahjehanpur.
13	Bhagwan Singh	Zilladar, Amballa ..	Panhour ...	Ludhiana.
14	Hakikat Rao	Veterinary Assistant, Hissar.	Gurdaspur ..	Gurdaspur.
15	Shib Ram	Veterinary Assistant, Hissar	Naranagar ...	Hoshiarpur.
16	Rachpul Singh	Risaldar, 6th Bengal Cavalry.	Manawala .	Gujranwala.
17	Mangal Khan	Sowar, 6th Bengal Cavalry	Kanour ...	Rohtak.
18	Bakshi Singh	Ditto ditto ...	Khoali ...	Amritsar.
19	Jowan Kishore	Naib Tahsildar, Amballa ...	Delhi .	Delhi.
20	Rahmatullah	Field Kanungo, ditto ...	Adhoa ...	Amballa.
21	Lana Singh	Zaildar, ditto ..	Amballa ...	Ditto.
22	Pat Ram	Lambardar ...	Kaonla ...	Ditto.
23	Karimbux	Mistry, Tahsil Amballa ...	Ludhiana ...	Ludhiana.
24	Ali Baksh	Lambardar ...	Amballa ..	Amballa.
25	Sukdarshan Singh	Field Kanungo, Jagadri	Bilaspur ...	Ditto
26	Amir Ali Khan	Zaildar, Bilaspur ...	Ditto ...	Ditto.
27	Balbir Singh	Do. Azizpur ..	Ditto ..	Ditto.
28	Allah Baksh	Do Kharwan ...	Kharwan ..	Ditto.
29	Nabi Nayaz	Zemindar, Amballa ...	Amballa ..	Ditto
30	Walari Khan	Lambardar ..	Bokhara ...	Sibi.
31	Mewa Khan	Zemindar ...	Marakdani ...	Do.
32	Abdul Hakim	Servant of Walari Khan ...	Bokhara ...	Do.
33	Jaro Khan, Dumki	Zamindar .	Lahri ...	Do.
34	Mir Tangai Khan	Ditto ...	Ditto ...	Do.

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